

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7628

Joint Petition of Green Mountain Power Corporation,
Vermont Electric Cooperative, Inc., and Vermont Electric
Power Company, Inc. for a Certificate of Public Good,
pursuant to 30 V.S.A. Section 248, for authority to construct
up to a 63 MW wind electric generation facility and associated
facilities on Lowell Mountain in Lowell, Vermont, and the
installation or upgrade of approximately 16.9 miles of
transmission line and associated substations in Lowell,
Westfield and Jay, Vermont

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PROPOSED FINDINGS OF FACT
AND
CONCLUSIONS OF LAW

NOW COMES the Green Mountain Club (GMC or Club) by and through its attorneys
Tarrant, Gillies, Merriman & Richardson and proposes the following Findings of Fact,
Conclusions of Law and Supporting Memorandum in the above captioned matter.

FINDINGS OF FACT

Introduction

The Kingdom Community Wind Project (Project) requires the “flattening” of Lowell
Mountain. This proposal is so substantial that it demands a decommissioning plan equal to it.
Three separate witnesses on different days stated that “this was a difficult project.” That
perhaps was an understatement.

The scope of this project requires a deep breath. If nothing else, the record is clear
about one thing - “there’s a large degree of uncertainty in determining what is undue and what
is adverse.” Trs. 2/24/11, p. 219, l. 1-4. Agency of Natural Resource (ANR) witness Eric
Sorenson stated this may be the largest construction project ever in the state of Vermont in

terms of scale and “major effect on our environment.” Trs. 2/24/11, p. 219, l. 7-10. From an environmental perspective he felt even after GMP and the ANR entered into their Memorandum of Understanding (MOU)¹ “(t)here’s a net loss.” Trs. 2/24/11, p. 219, l. 1-4. Given the lack of details and uncertainty in the MOU we respectfully ask the Board to be cautious as it proceeds.

The ridgeline will be clear cut and “flattened” for four continuous miles. As proposed the cleared area would be 190 to 215 feet in width along the crane path and an additional 250 feet at each turbine pad for a total of approximately 450 feet in width. Trs. 2/3/11, p. 198, l. 17-24 to p. 199, l. 1. (“Q. So there would be a gap in the forest of approximately 450 feet at that location? A. Yes. At the turbine pads, yes. That’s correct.”); p. 219, l. 12-13; also p. 198, l. 25 to 199, l. 1. The average would be more than 200 feet wide along the four mile crane path. Trs. 2/3/11, p. 219, l. 15-18. According to Ian Jewkes there would be “a huge amount of earth work” on the ridgeline. Trs. 2/3/11, p. 220, l. 10.

To stabilize the turbine pads up to “easily a hundred” additional feet of clearing in width would be required to extend the toe of the slopes at each of the 20 or 21 turbine pads. The crane path with the 20 or 21 turbines pads is proposed to run four miles in length along the ridgeline. Trs. 2/3/11, pp. 197-200. In places the clearing on the ridgeline would be up to 600 feet wide or three times as wide as I-89, which is 200 feet wide. Trs. 2/24/11, p. 231, l. 1-3.

Where the access road meets the crane path the road turns into a 320 foot clearing. Trs. 2/3/11, p. 200, l. 15-24 and p. 201, l. 16. Scaling it longitudinally going from northwest to southeast the clearing would be 520 feet wide. Trs. 2/3/11, p. 201, l. 20-25 to p. 202, l. 1.

¹ The MOU between the ANR and GMP, sometimes referred to by the parties or witnesses as the “stipulation”, is a “framework” under which the ANR and GMP have agreed to proceed in developing a set of comprehensive decommissioning and mitigation plans. Trs. 2/24/11, p. 207, l. 5-7 and 14-19.

The access road would require at least 152 feet of clearing along a 2.5 mile stretch up the side of the mountain. Trs. 2/3/11, p. 203, l. 4-5. There would be locations along the access road “in which the clearing would be much wider” Trs. 2/3/11, p. 203, l. 25. From the beginning GMP did not propose to remove or revegetate the access road or associated storm water features. Trs. 2/3/11, p. 211, l. 4-6. The MOU did not provide for the re-vegetation of the access road or its associated stormwater management system. Trs. 2/24/11, p. 243, l. 25 to p. 244, l. 1-5.

GMP proposes in its stipulation with the Agency of Natural Resources to revegetate about four miles of the 6 ½ miles of roads and crane paths – or a little more than half of these “gaps” or clearings caused by the Project. It fails to conserve approximately a half mile of the ridgeline. Trs. 2/24/11, p. 209, l. 1-9 and 23-25 to p. 210, l. 1.

In failing to revegetate the access road and stormwater management system running along the access road the MOU not only runs counter to the Agency’s (Trs. 2/24/11, p. 244, l. 1-5) and the Club’s positions but it runs counter to the recommendations of the WTGAC and GMP’s expert’s testimony, who testified on February 8, 2011, as follows:

Q. Do you believe a reasonable person would believe that a wind developer should have a decommissioning plan that would leave the roads and crane paths and stormwater infrastructure in place after the energy stopped flowing?

A. I think that if the developer provides for or allows for the revegetation of those particular elements, that that is a reasonable approach to decommissioning.

Trs. 2/8/11, p. 90, l. 19-25 to p. 91, l. 1.

The Green Mountain Club respectfully requests that appropriate conditions be imposed requiring GMP to install the Object Collision Avoidance System (OCAS) and to revegetate the

access road and stormwater management system that parallels the road and, if at all possible, conserve all four miles of the crane path that will be permanently impacted.

GMP has an opportunity not only to offer renewable wind power, but to offer it in an environmentally respectful manner.

I. The Green Mountain Club's Position

The GMC does not oppose the Project if it is done right.

1. The Club does not oppose the Project. Page Direct, p. 18, l. 16-17; Trs. 2/9/11, p. 202, l. 3-10; p. 210, l. 22-23.

2. Without appropriate mitigation, including appropriate decommissioning, the Project will have an undue adverse impact on the Long Trail. Vissering Direct, p. 3, l. 18-20; Examination by Chairman Volz of Vissering, Trs. 2/8/11 at p. 155, l. 16-18; Trs. 2/9/11, p. 203, l. 3-14.

3. With mitigation and with a reasonable decommissioning plan including OCAS the Project can be sited here. Vissering Direct, p. 10, l. 9 and p. 11, l. 1-3.

4. If a company wishes to propose a renewable or green energy project it should do it right, by proposing a reasonable decommissioning plan with proper mitigation, Trs. 2/9/11, p. 202, l. 6-7.

5. The Project will be the second largest electric utility project in the State behind only Vermont Yankee, and it will be sited on the top of Lowell Mountain – four miles long, 250 feet wide and almost 450 feet high. It is being sited in one of the most sensitive locations possible, on a mountain ridge in a remote, scenic area. Page Direct, p. 18, l. 17-20. It is

because its proposal is so substantial that it demands mitigation² equally sizeable. Page Direct, p. 18, l. 20-21 to p. 19, l. 1-2 and p. 20, l. 12-15; Vissering Direct, p. 8, l. 4-5.

6. The Club wants to ensure “the Board takes every reasonable step possible to mitigate (the aesthetic impacts), including by ensuring that all necessary steps are taken to decommission the Project in a respectful manner so that the footprint it has created is not left behind for future generations to view from the Long Trail.” Page Direct, pp. 3-4.

7. If the Project is constructed, the Club is asking the Board to impose the maximum feasible mitigation to ensure that the impact on the Long Trail will be as minimal and temporary as possible. Page Direct, p. 14, l. 7-9.

8. The Club asks that three factors be included within any order approving the Project: i.) require the implementation of the OCAS system to mitigate the FAA lights; ii.) impose a “serious” comprehensive decommissioning plan that includes ridgeline restoration and conservation, re-vegetation of the access road and crane path and stormwater infrastructure; and iii.) reduce the scope of the project.³ Trs. 2/9/11, p. 173, l. 4-13; See Finding 22, 23 and 192.

9. Without these three steps the proposal would have an undue adverse impact on the Long Trail. Trs. 2/8/11, p. 155, l. 16-18.

10. The Project will be sited on the top of Lowell Mountain, require the permanent removal of four miles of the mountain’s ridgeline with roads and crane paths up to 200 + feet wide and clearings up to 450 + feet wide where the turbines will be located. There will be over 6.5 miles of 200 - 450 foot wide clearings including the access road and crane paths and turbine

² The witnesses at the hearings often used “mitigation” in a broader sense to sometimes include decommissioning.

³ At this point, the MOU between the Agency and GMP does not propose to conserve the lands at either end of string of turbines. Trs. 2/24/11, p. 209, l. 23-25 to p. 210, l. 1. The Agency would prefer to have the full impacted ridgeline protected. Trs. 2/24/11, p. 210, l. 5-8. Reducing the scope of the Project (i.e. number of turbines on either end) would be one way to address this failure.

locations. These scars will be seen from the Long Trail and many other locations within the ten mile viewshed for at least 25 and possibly 50 to 75 years. This is a major undertaking in a highly visible location. Trs. 2/3/11, p. 198, l. 17-24 to p. 199, l. 1; p. 219, l. 12-13 and 15-18; p. 220, l. 10; p. 203, l. 4-5, 25.

11. GMP did not propose a reasonable decommissioning plan with its application. The MOU entered into with the Agency of Natural Resources (ANR) is obviously a step in the right direction but it was put together on the run with pressure from the Administration to get it done quickly. It offers a framework and it still leaves major issues unresolved with no time limit imposed on GMP. Trs. 2/24/11, p. 246, l. 4-7.

12. Under the MOU between the ANR and GMP, only four miles of the 6.5 miles of intensive clearing will be “decommissioned”, leaving the access road and its stormwater management system *not* addressed by the MOU. At least a half mile of the ridgeline will not be conserved. Trs. 2/8/11, p. 90, l. 19-25 to p. 91, l. 1. This does not meet minimum national guidelines for decommissioning, does not meet the Agency’s position, and does not meet Mr. Raphael’s recommendations. Trs. 2/8/11, p. 90, l. 19-25 to p. 91, l. 1.

13. The Project as presently proposed will significantly harm the Long Trail and without additional mitigation will have an undue adverse impact on the Long Trail. Vissering Direct, p. 9. L. 18-19; p. 12. L. 27-30; p. 20, l. 20 to p. 21, l. 1-2.

14. The Project after the MOU was proposed still does not meet the minimum national guidelines for decommissioning most other states follow which would include removing the roads, crane paths and infrastructure. It should conserve the additional half mile of ridgeline if it proposes to build turbines in those locations.

15. LandWorks Report dated May 2010 stated unequivocally that GMP met the necessary standards for decommissioning in May 2010 before the MOU was even contemplated, and before any re-vegetation was proposed by GMP. LandWorks Report May 2010, p. 57.

16. Mr. Raphael subsequently testified on February 8, 2010 during his cross-examination that although GMP did not propose in its application to remove the roads, crane paths and infrastructure or even revegetate them, a reasonable person would require re-vegetation of the roads, crane paths and stormwater infrastructure. This was before the MOU was announced. Trs. 2/8/11, p. 90, l. 19-25 to p. 91, l. 1.

17. Mr. Raphael testified near the end of his cross-examination on February 8, 2011: "I think Green Mountain Power should take every step that's reasonable to decommission the project." Tr. 2/8/11, p. 265, l. 7-8.

18. In evaluating whether the Project violates a clear written community standard intended to preserve the aesthetics of scenic, natural beauty of the area, Mr. Raphael reviewed all local and regional plans within the ten mile viewshed. The Regional Plan provides the "Applicants must include a comprehensive de-commissioning plan when filing for a Certificate of Public Good." LandWorks Report, p. 51. Mr. Raphael initially read this as a goal. The application clearly violates this clear written community standard. The MOU has taken strides to meet this requirement.

19. The MOU is substantially better than what GMP had originally proposed.

20. The MOU does not propose to remove the roads, crane paths or infrastructure. Rather, it proposes to revegetate the crane paths and infrastructure on the ridgeline. It proposes to leave approximately half a mile of the ridgeline without permanent conservation. It does not

propose to remove or revegetate the two and a half miles access road and its associated stormwater management system.

21. The Green Mountain Club supports renewable energy projects, including those with reasonable but comprehensive de-commissioning plans that meet the recommendations of the Wind Turbine Guidelines Advisory Committee. Trs. 2/9/11, p. 112, l. 9 and l. 17-25; and p. 178, l. 16-18.

22. The Club asks that if the Board approves the Project it does so with four express conditions:

- i. GMP applies for and installs an OCAS system for its FAA lights; and
- ii. GMP follows the national advisory guidelines, with the allowance that if it does not wish to remove the access roads, crane paths and stormwater management systems it need not do so, but it must at least revegetate and restore them as proposed by the ANR, including the re-vegetation of cut and fill slopes consisting of blasted rock;
- iii. GMP must follow the mitigation as agreed to by GMP and ANR; and
- iv. GMP must continually work with the ANR to implement the MOU and the Board's conditions, as required.

Vissering Direct, p. 18-19.

23. In the event GMP wishes to retain the access road and its stormwater infrastructure and not conserve approximately one half mile of the ridgeline the GMC recommends the removal of turbines in those areas not proposed to be permanently conserved.

Vissering Direct, p. 18, l. 2-4.

II. The Green Mountain Club.

24. The GMC is a private non-profit corporation organized in 1910 to build and maintain the Long Trail with over 9,500 members. Page Direct, p. 2, l. 13-14; p. 3, l. 6-8.

25. Since completing the Long Trail in 1930 the GMC has devoted resources to the construction of overnight shelters, annual maintenance and reconstruction of the Trail and other activities to promote hiking for its members and the public. Page Direct, p. 2, l. 14-18.

26. The Long Trail is the oldest continuous long-distance hiking trail in the United States. It is a 272 mile-long hiking trail that follows the main ridge of the Green Mountains for the entire length of the state of Vermont. Page Direct, p. 4, l. 5-9.

27. The Long Trail is a simple foot path with access to shelters, summits and other significant points between road crossings. Signage is minimal. Use is restricted to pedestrians. Rustic shelters are located at intervals of no more than a day's hike. Page Direct, pp. 4-5.

28. The GMC has obtained public assistance over the past 100 years to build and maintain the Long Trail. Page Direct, p. 2, l. 18-20.

29. The GMC is celebrating its 100th anniversary in 2010. Its mission is to preserve a sense of wilderness hiking for the next hundred years and beyond. It has been constructed and maintained to maintain a sense of wilderness for its members and hikers. Page Direct, p. 3, l. 13-18; p. 5, l. 11-18; p. 11, l. 11-12.

30. The Long Tail system constitutes a recreational resource of both state and national significance. It is both a natural and historic resource. Page Direct, p. 4, l. 14-15; Vissering Direct p. 3, l. 2021.

31. It is estimated over 200,000 hikers use the Long Trail system each year. Hiking is the most popular outdoor recreation activity among the state's visitors during summer and fall. Page Direct, p. 6, l. 1.

32. This is the first wind project proposed in Vermont to have significant visual impacts on the Long Trail due to its proximity and visibility from a number of highly scenic viewpoints. Vissering Direct, p. 25, l. 12-14.

33. GMC is charged with the protection of the Long Trail and will continue to be concerned about the particular projects especially with continued intrusion into the Trail's more remote segments. Vissering Direct, p. 9, l. 16-18; Trs. 2/9/11, p. 22-25 to p. 196, l. 1.

III. The Long Trail is Unique with State and National Support.

34. The Long Trail is a unique community stretching from Massachusetts to the Canadian border. It is a highly valued scenic resource of both state and national significance. Vissering Direct, p. 4, l. 16-19; p. 20, l. 1-4; p. 15, l. 9-11; LandWorks Report, pp. 11, 56; Trs. 2/9/11, p. 158, l. 17-25 to p. 159, l. 1-2 and 5-8.

35. The State of Vermont, through the Department of Forests, Parks and Recreation, is deeply involved in the preservation and health of the Long Trail. Page Direct, p. 9, l. 2-21 and p. 10, l. 1-21 and p. 11, l. 1-13; p. 20, l. 4-5.

36. The Vermont Legislature has been concerned that the Long Trail is being "threatened by the rapid encroachment of residential, commercial and business activity." It has formally recognized the GMC as the "defender and protector of the Long Trail system." Page Direct, p. 10, l. 5-9; Vissering Direct, p. 20, l. 9-10.

37. Since 1986 GMC has been the recipient of more than \$4.5 million in state legislative appropriations in the state budget, in addition to support through the Vermont

Housing and Conservation Board to help it acquire permanent legal ownership of the land corridor on which the Long Trail is located. Page Direct p. 12, l. 8-12; Vissering Direct, p. 20, l. 10-12; Trs. 2/9/11, p. 159, l. 3-4; Vissering Surrebuttal, p. 10, l. 20-21.

38. It is the obligation of regulating bodies to reasonably protect the Long Trail using the regulatory standards in place, including employing substantial mitigation.⁴ Vissering Direct, p. 20, l. 12-14.

39. The Long Trail's scenic values are much greater than the Champion lands, mostly because of its recognition, use and experience. Trs. 2/9/11, p. 160, l. 8-16.

40. The Long Trail has been in existence for 100 years and expects to be in existence perpetually into the future. The longevity of the Long Trail is important regardless of how long the Project is in existence. Trs. 2/9/11, p. 17-23.

41. The Long Trail is the single most significant recreational resource asset within the ten mile scenic view shed. LandWorks Report, p. 56. It is unique in providing one of the few places left in Vermont where one can experience a sense of solitude and remoteness along with stunning views. Vissering Direct, pp. 9-10; Trs. 2/8/11, p. 73, l. 23-25 to p. 74, l. 1-2, l. 23-24.

IV. Why GMC Became Involved with the Kingdom Community Wind Project.

42. The GMC is not opposed to wind projects per se. Trs. 2/9/11, p. 202, l. 3-10; p. 210, l. 22-23.

43. The Project will change the experience of the Long Trail by inserting large structures into what is now relatively free of built elements. (Colloquy with Chairman Volz and Ms. Vissering.) Trs. 2/9/11, p. 131, l. 4-10.

⁴ See footnote 1 and 3, above.

44. This Project as presently proposed will harm the Long Trail. The Project without reasonable, but significant mitigation will have an undue adverse impact on the Long Trail. With significant mitigation it should be approved. Vissering Direct, p. 9, l. 18-19; p. 13, l. 27-30; p. 20, l. 20 to p. 21, l. 1-2; Trs. 2/8/11, p. 155, l. 16-18; Trs. 2/9/11, p. 202, l. 6-16; p. 203, l. 3-14; p. 210, l. 12-18; Trs. 2/9/11, p. 161, l. 3-8.

45. GMC has monitored other wind applications and considered the impacts from other wind projects and decided not to become involved. The impacts from the Kingdom Community Wind Farm however will be greater and in some respects have an undue adverse impact on the Trail. Page Direct, p. 14, l. 2-4; p. 15, l. 10-13; Trs. 2/9/11, p. 208, l. 5-18; Vissering Surrebuttal, p. 11, l. 4-6.

46. While many members of the GMC support wind power and are concerned with climate change, many members are also concerned with the industrialization of Vermont's mountains. Page Direct, p. 13, l. 12-14; Trs. 2/9/11, p. 202, l. 6-10, p. 210, l. 12-23.

47. GMC's position, however, is not based on these general environmental concerns. It is based solely on the objective and undeniable impact the Project will have on the Long Trail between Belvidere Mountain and Haystack Mountain. Page Direct, p. 13, l. 15-19; Trs. 2/9/11, p. 209, l. 21-23.

48. The impacts on this section of the Long Trail will be substantial, adverse and in some respects undue. Page Direct, p. 13, l. 18-19; Trs. 2/9/11, p. 210, l. 12-14. The Long Trail contains vantage points which look down on the access road and stormwater infrastructure. Findings 104, 200, 203 and 284. The impacts from the Project are permanent. Findings 260 and 330.

V. The Section of the Trail Affected.

49. The section of the Long Trail between Route 118 in Eden and Route 58 in Westfield is approximately 10 miles in length and will be directly and significantly impacted by the proposed wind farm. GMC-JP-1 is a map showing the Project in relation to the Long Trail System. Page Direct, p. 6, l. 18-20 to p. 7, l. 1-2; p. 13, l. 18-19; Trs. 2/9/11, p. 210, l. 12-14.

50. This section of the Long Trail is one of the most remote, rugged and undeveloped portion of the Long Trail. The only man-made encroachments are the fire tower on Belvidere, Tillotson Camp and a few logging roads near Route 118. It's a remote landscape. Page Direct, p. 7, l. 3-6; Vissering Direct, p. 4, l. 2-3; p. 8, l. 4-5; p. 10, l. 3-4; p. 22, l. 16-18; Vissering Surrebuttal, p. 6, l. 2-4; Trs. 2/9/11, p. 105, l. 13-18; Trs. 2/9/11, p. 160, l. 16.

51. The closest point the Long Trail is from the Project is about 4 and a half miles. Tillotson Camp is about six and a half miles from the Project. Trs. 2/9/11, p. 106, l. 11-14; p. 190, l. 24-25 to p. 191, l. 1-9; LandWorks Report May 2010, p.34, second paragraph ("... over five miles from the Project, ..."); p. 55 ("...at 6 miles away or farther."); p. 57 (6 miles).

52. There are several vantage points along this section of the Long Trail where the Project will be openly visible, but the two primary vantage points that the GMC is concerned about are from the top of Belvidere Mountain and from Tillotson Camp. Trs. 2/9/11, p. 193, l. 12-19.

53. Since 1986 the Club has purchased or otherwise received title to 14 tracts of land between Route 118 in Eden and Route 58 in Westfield. Page Direct, p. 13, l. 1-2. One of the tracts of conserved land is the so-called Meltzer tract of approximately 1,800 acres which is directly below Tillotson Camp down into the valley. Trs. 2/9/11, p. 193, l. 24-25 to p. 194, l. 1-6; p. 203, l. 15-25 to p. 204, l. 1-12.

54. Protection efforts along this section of the Trail include multiple acquisitions of private parcels over the past twenty-two years which have been aggregated into the Long Trail State Forest. Vissering Direct, p. 5, l. 2-4.

55. The sense of remoteness is greatly enhanced by the fact that the majority of views from the Trail are to the eastward where the entire undeveloped "Northeast Kingdom" of Vermont stretches out with minimal visible human presence when viewed from the Long Trail. Page Direct, p. 7, l. 6-10.

56. The proposed wind project will be highly visible from the fire tower and the Long Trail Shelter, Tillotson Camp. Page Direct, p. 7, l. 15-17; Vissering Direct, p. 22, l. 16-20.

57. There are several other open eastward-facing views from the Long Trail on Tillotson and Haystack Mountains, lying to the north of Tillotson Camp. From these vantage points, the views extend beyond the Lowell Range to include the eastern expanse of the Northeast Kingdom and, on a clear day, the Presidential Range in New Hampshire. Page Direct, p. 8, l. 3-7; Vissering Direct, p. 4, l. 3-6.

VI. Tillotson Camp.

58. Tillotson Camp was built by Prof. Roy O. Buchanan and GMC's Patrol in 1939. The present camp is one of only ten shelters on the Long Trail that pre-dates WW II. Tillotson Camp is highly significant as the last remaining *in-situ* example of a shelter that was once the standard on the Long Trail. It has sufficient historic significance for inclusion on the National Register of Historic Places. Today, Tillotson Camp is the last remaining "Buchanan-style camp" in active use on the Long Trail. Page Direct, p. 15, l. 16-20; p. 16, l. 9-21; Vissering Direct, p. 7, l. 9-15.

59. Tillotson Camp is used primarily at night. Vissering Surrebuttall, p. 7, l. 8.

60. The Project will be highly visible from the Long Trail shelter, Tillotson Camp, where people stay overnight. Hikers generally reach the Camp in the late afternoon to rest, cook dinner, and take in the views. Page Direct, p. 7, l. 15-17; Vissering Direct, p. 6, l. 13-19.

61. Tillotson Camp sits on a large, eastward-facing open rock ledge which functions as the shelter's outdoor "front porch." Hikers often gather on this ledge to cook, relax, or gather around the outdoor fire pit. The views from the ledge encompass the entire Lowell Range and not much else. Page Direct, p.p. 7-8;

62. The front door and fire pit area look directly at the Lowell Range. This is where hikers stop, rest and enjoy the view. The Lowell Range is the focus of the view and is framed on both sides by trees. The Lowell Mountains occupy the entire opening. For this reason, the turbines and the lights at night will be particularly prominent. Vissering Direct, p. 6, l. 14-19; Vissering Direct, p. 7, l. 14-15.

63. Tillotson Camp looks directly at the Lowell Range, and for campers spending the night, this represents a long duration of view in a location where there is a very high expectation of a natural setting. Vissering Direct, p. 14, l. 9-11.

64. The Tillotson Camp vista is probably not entirely a naturally occurring vista and is to some extent the result of human effort to keep the view open over the years by hikers, but the eastward view is essentially unchanged since at least the 1960's and perhaps since 1928. Page Surrebuttall, p. 1, l. 21-25 to p. 2, l. 1-5.

65. The view to the east from Tillotson Camp encompasses perhaps 45 degrees, sufficient to frame the entire Lowell Range. Page Surrebuttall, p. 4, 19-10.

66. Without mitigation, the Project will dramatically change the experience at Tillotson Camp. Examination by Chairman Volz of Vissering, Trs. 2/8/11, p. 129, l. 8-10; Trs. 2/9/11, p. 8-10.

67. Night lighting raised the concerns at Tillotson Camp to it becoming completely out of character with the experience because hikers will be coming into camp near nighttime. Trs. 2/9/11, p. 130, l. 5-10.

68. At night often no one is inside the shelter at Tillotson Camp. The outside area is a critical part of the Camp. Often there are many hikers at the Camp who will stay outside and enjoy the night landscape. Trs. 2/9/11, p. 137, l. 17-25.

69. Tillotson Camp presents one of those unique experiences that happens along the Long Trail where the hikers get to be completely surrounded by a natural landscape. Trs. 2/9/11, p. 130, l. 11-19.

VII. The Problems of a Large Scale Project with Insufficient Decommissioning.

70. An important issue in any aesthetic evaluation is the expected experience level. What are the expectations of the viewer? From the Long Trail there is an expectation of a natural landscape. Trs. 2/9/11, p. 143, l. 21-25 to p. 144, l. 1-2.

71. Each project needs to be seen and experienced from the Long Trail before determining the impacts (e.g. proximity, number of turbines in the view, duration of the view, and scenic quality of the view). Vissering Direct, p. 10, l. 18-21.

72. Impacts depend not only on the distance, but on a number of factors, such as the number of turbines that are seen, the duration of the view, the particular characteristics of the viewpoints involved. Each case is different. Trs. 2/9/11, p. 126, l. 2-10.

73. The proposal presents a project that has adverse to undue adverse impacts on the environment. Examination of Chairman Volz of Vissering, Trs. 2/8/11, p. 128, l. 23-25.

74. The Project is not inherently inappropriate rather its design imposes undue impacts onto resources on the Trail which need to be appropriately mitigated. Vissering Direct, p. 11, l. 1-3; p. 13, l. 30-34 to p. 13, l. 1-6; Trs. 2/9/11, p. 210, l. 12-18; Trs. 2/9/11, p. 161, l. 3-8.

75. The scale and length of the Project (height and number of turbines) will adversely impact this entire section of the Long Trail. Page Direct, p. 8, l. 8-9; p. 19, l. 16-21; Vissering Direct, p. 8, l. 4-5.

76. Either 380 foot or 443-foot turbines will be easily visible at 6-7 miles away. Six to seven miles is relatively close. They would be easily visible at 15 miles away. Vissering Direct, p. 8, l. 8-10; p. 13, l. 11-12.

77. The GMC board is concerned with the magnitude and height of the turbines within the Trail's viewshed. Twenty-one turbines at 443 feet high present a formidable impact. Add the FAA lights and the impacts are clearly undue. Page Direct, p. 17, l. 18-21; p. 19, l. 16-18; Examination by Chairman Volz of Vissering, Trs. 2/8/11, p. 155, l. 16-18.

78. A more important consideration than even height is the overall number of turbines or "horizontal scale" of the Project as it is seen from sensitive viewing areas along the Trail, and particularly from Tillotson Camp. Vissering Direct, p. 8, l. 10-13.

79. Of particular concern are two locations: Belvidere Mountain and Tillotson Camp. Tillotson Camp is a particular concern. Most GMC's shelters were specifically located to take advantage of views and Tillotson Camp is a good example. Vissering Direct, p. 6, l. 11-13; Examination by Chairman Volz of Vissering, Trs. 2/8/11, p. 129, l. 4-5.

80. Views from Belvidere Mountain are unusual and provide distinctive views of the landscape. Mr. Raphael's criticism that one can see patterns of a working landscape misses the point. While there are some tiny cultural elements that can be seen, the view is unique and dramatic. The cultural elements are a minor part of the overall views. Trs. 2/9/11, p. 127, l. 4-22.

81. Many of the cultural facilities in the valley tend to be hidden because the hills screen them from view. Trs. 2/9/11, p. 127, l. 23-25 to p. 128, l. 1.

82. The proposed FAA lighting will dominate and dramatically alter the nighttime view from Tillotson and pose an undue adverse effect on the entire experience of hikers who stay at Tillotson Camp. Page Direct, p. 8, l. 10-12; Vissering Direct, p. 25, l. 14-16.

83. The GMC is concerned that since there isn't statewide planning for wind production like some other states, there may be long term cumulative impacts to the Trail that were not otherwise intended. Page Direct, p. 17, l. 4-8.

84. There will be 6.5 miles of roads associated with the project, consisting of a 2.5 mile access road and a 4 mile crane path. Trs. 2/3/11, p. 195, l. 7-9; p. 199, l. 22-25 to p. 200, l. 1; p. 202, l. 7.

85. GMP needs considerable side slopes because it will be changing the contours and landscape of the ridgeline and because it will need flatten the ridgeline and bring in considerable fill. Trs. 2/3/11, p. 196, l. 4-13. Toe of slope to toe of slope means where the grading for the new work meets the existing ground. Trs. 2/3/11, p. 196, l. 23-25 to p. 197, l. 1-2.

86. Although the travel surface of the crane path will be 34 feet wide the actual width of the road to build the storm water collection and side slopes in considerably wider. Trs. 2/3/11, p. 195, l. 13-25 to page 196, l. 1-3.

87. The actual width of the crane path on the ridgeline will be between 190 and 215 feet wide not including the storm water treatment practice areas which extend beyond the toe of slope area. Trs. 2/3/11, p. 197, l. 8-18; p. 198, l. 10-14. It will average over 200 feet wide. Trs. 2/3/11, p. 219, l. 15-18.

88. To construct the crane path, the toe of slope area and the storm water management system outside the toe of slope area GMP will need to clear the forest on the ridgeline. Trs. 2/3/11, p. 198, l. 1-9.

89. The crane path will not stay predominantly on the top of the ridgeline but will “wind all over the place.” Trs. 2/3/11, p. 220, l. 17-20.

90. There will be a huge amount of earthwork to construct just the crane path. Trs. 2/3/11, p. 220, l. 10.

91. GMP never did any analysis “of what the post decommissioning impact will be on the area due to the fact that the road and the storm water components will be left there.” Trs. 2/3/11, p. 221, l. 23-25 to p. 222, l. 1-2.

92. Thus, when it negotiated its MOU with the Agency in which only the crane path will be revegetated GMP had no idea what the “post decommissioning impact will be on the area” with 2 ½ miles of access road and storm water infrastructure left on the mountain side. Trs. 2/3/11, p. 221, l. 23-25 to p. 222, l. 1-2.

93. The storm water management system will have basins deep enough to carry large amounts of water, enough to meet the 100 year storm event. Trs. 2/3/11, p. 216, l. 12 -24.

94. The storm water improvements would need to be maintained until the impervious surface is gone. That means for at least 2 ½ miles of roads there will be large basins running next to them for an extended, indefinite period of time after the life of the project. Trs. 2/3/11, p. 223, l. 15-16 and 19-22.

95. The actual cleared area on the ridge line would be “quite a bit wider” than 215 feet in width. If you include the width at and near each of the 20 or 21 turbines you need to add an additional 250 feet of cleared area. The width along the ridgeline in these locations would be at least 450 feet wide or one and a half times as wide as a football field and run 4 miles in length. Trs. 2/3/11, p. 198, l. 17-24.

96. Mr. Sorenson agreed the width would generally be up to 200 feet wide and in locations “three times the width” of I-89 or upwards of 600 feet wide along the ridgeline. The width of I-89 is 200 feet. Trs. 2/24/11, p. 230, l. 23-25 to p. 231, l. 1-3, 13-15.

97. To construct the turbine pads GMP needs enough fill to allow for the pads to be stable so the actual clearing required for the turbine pads is in excess of 250 feet which can be up to an additional 100 feet in width. Trs. 2/3/11, p. 199, l. 7-21.

98. The 2.5 mile access road would in some places be 152 feet wide with clearings “much wider” at certain locations to accommodate the storm water management features. Trs. 2/3/11, p. 203, l. 5 and 25.

99. Gaps in the forest for both the access road and crane paths will remain during the life of the Project. Trs. 2/3/11, p. 205, l. 1-3.

100. The application proposed to retain the access road, crane path and storm water infrastructure features after decommissioning. Trs. 2/3/11, p. 52, l. 12-22; Trs. 2/3/11, p. 205, l. 4-10.

101. Unless the MOU addresses these features, the widths and the clearing and the gaps in the forest will remain after decommissioning. Trs. 2/3/11, p. 2-5, l. 11-15.

102. The MOU does not address the 2.5 mile access road and storm water system. Thus, 2 1/2 miles of the 6.5 miles of roads and stormwater infrastructure will remain without removal or re-vegetation after decommissioning. Trs. 2/3/11, p. 205, l. 11-15; p. 211, l. 4-6.

103. GMP claimed it would be leaving the access road in place to assist the landowner log, but there is already a logging road in place along the proposed access road. Trs. 2/3/11, p. 52, l. 23-25 to p. 53, l. 1.

104. Unlike most valley views from which turbines are seen emerging from relatively undisturbed forest lands, when seen from high elevation vantage points, the roads and clearings are likely to be visible along with the turbines creating a much larger alteration of the natural landscape and more significant visual impacts. Vissering Direct, p. 6, l. 6-10.

105. The aesthetics assessment contained in LandWorks Report, dated May 2010 is not credible. It has major inconsistencies and inaccuracies. Trs. 2/8/11, pp. 75-78.

106. Mr. Raphael stated in his Report that he made "visits to important public vantage points and scenic and conservation resources" before rendering his opinions and issuing his Report. Mr. Raphael stated that he made "extensive reconnaissance" efforts to all locations. He attempted to make a visit to Tillotson Camp in February 2010 but had to turn back due to inclement weather. Neither he nor his staff returned to Tillotson Camp prior to issuing the May 2010 Report, yet failed to inform the reader that he failed to visit Tillotson Camp as part of his extensive reconnaissance prior to developing his opinion and writing his report. LandWorks Report, p. 7; Trs. 2/8/11, p. 75, l. 3-7; l. 18-19.

107. Mr. Raphael testified at the hearings that he “sent somebody from my staff up there who, you know, serves certainly as my eyes and ears in those kind of instances.” Trs. 2/8/11, p. 76, l. 2-4; l. 8-10.

108. Mr. Raphael explicitly stated at the hearings that “my staff members” visited Tillotson Camp prior to issuing LandWorks Report in May 2010. Trs. 2/8/11, p. 76, l. 16-19. (“I personally didn’t but my staff members did.”)

109. Mr. Raphael then testified that according to his May 2010 Report his staff field checked Tillotson Camp prior to the Report being issued. Trs. 2/8/11, p. 76, l. 20-24; p. 77, l. 11-13.

110. Mr. Raphael remained unclear. The Question was:

Q. (Tarrant) . . . And when you say *in your report* that you *field checked Tillotson Camp*, you don’t mean to suggest that you field checked it, correct?

A. (Raphael) As I indicated previously, my staff field checked it.

Trs. 2/8/11, p. 76, l. 20-24. (Emphasis added)

The Chairman then asked Mr. Raphael:

Q. (Chairman Volz) Mr. Raphael, I was under the impression you were saying your staff visited the Tillotson Camp and the Long Trail before your report was issued, but I guess I misunderstood that.

A. (Raphael) No. I didn’t say Tillotson Camp specifically, although as I did indicate myself and my – one of my staff members got to within a hundred yards.

* * * * *

Q. (Chairman Volz) All right, but I thought I understood you to say some of your staff went up before March or February of 2010 before you went up. Did I misunderstand that?

A. (Raphael) You know that's possible. I have to check that. I can't say that for sure.

Trs. 2/8/11, p. 77, l. 17-25.

111. Neither Mr. Raphael nor his staff made any further attempts to visit the Long Trail or Tillotson Camp before issuing LandWorks' Report in May 2010. Trs. 2/8/11, p. 103, l. 2-11; p. 106, l. 16-20.

112. Yet, the May 2010 Report specifically states that LandWorks "field checked" Tillotson Camp prior to issuing its Report and Mr. Raphael clearly stated at the hearings that his staff field checked Tillotson Camp before his May 2010 Report was issued. LandWorks Report, p. 28; Trs. 2/8/11, p. 76, l. 20-24.

113. The Chairman was confused further:

Q. (Chairman Volz) Now I'm a bit more confused. In the report on page 28 – the report is dated May 2010. In the paragraph that Mr. Tarrant just asked you to read from or look at it says there in addition to the resources described in table 2 above, a number of public vantage points in the 10-mile radius have been field checked and are addressed here in narrative form. These include, and if you read the list Tillotson Camp is listed.

A. (Raphael) Correct.

Trs. 2/8/11, p. 81, l. 12-23.

114. Mr. Raphael then concluded that his staff did go to Tillotson Camp prior to the Report being issued in 2010. Trs. 2/8/11, p. 76 ("As I indicated previously, my staff field checked it."); also p. 82, l. 1-15.

115. Mr. Raphael was requested to check with his staff. He later reported that no one from his staff visited or field checked Tillotson Camp prior to issuing LandWorks Report in May 2010 and that he felt getting within a hundred yards of Tillotson Camp in February 2010

was what he meant when he stated he had done extensive site reconnaissance and later field checked Tillotson Camp. Trs. 2/8/11, p. 103, l. 5-11; p. 106, l. 16-20.

116. In his rebuttal testimony Mr. Raphael criticized Miss Henderson-King's conclusions because she did not undertake a field analysis, yet while LandWorks' May 2010 Report expressly maintained he had done "extensive site reconnaissance efforts, visits to important public vantage points and scenic and conservation resources" and had "field checked" Tillotson Camp, the hearings ultimately revealed that neither he nor his staff had done any reconnaissance visits to Tillotson Camp or field checked Tillotson Camp. See Proposed Findings 106-115, above.

117. Mr. Randolph's conclusion concerning Miss Henderson-King's failings to undertake a field analysis was "based on her own admission" while apparently Mr. Raphael's was not. Trs. 2/8/11, p. 99, l. 23; p. 100, l. 3-13.

118. Mr. Raphael's Report concluded that "(t)he Long Trail is arguably the most significant recreational asset in the viewshed of the Kingdom Community Wind Project. . . ." and he concluded that hikers would not find the Project shocking or offensive as a result of his analysis. LandWorks Report, p. 56; Trs. 2/8/11, p. 20-24.

119. Mr. Raphael included in his assessment that hikers favor wind power because the role it plays "in reversing global warming, contributing to a more sustainable future and a more healthy environment." LandWorks Report pp. 57.

120. Mr. Raphael cited the Redington Wind Farm Visual Analysis Survey at least twice in his Report for supporting hiker satisfaction of wind turbines. LandWorks Report, pp. 56-57. The Redington Wind Project was denied by the State of Maine due to its impacts on the

Appalachian Trail, despite the so-called “favorable” survey Mr. Raphael cited. Vissering Direct, p. 21, l. 20-21, l. 1.

121. Under cross-examination Mr. Raphael testified that he did not take into consideration as part of his aesthetic evaluation that the Project was a renewable energy project that provided energy benefits to Green Mountain Power Corporation. Trs. 2/8/11, p. 67, l. 10-15. Yet he undeniably did.

122. In his May 2010 Report Mr. Raphael referred to societal benefits, alternative energy benefits, renewable benefits, the benefits of reversing global warming, the benefits of creating a sustainable future, a desirable option for generating lower cost local energy and/or a project that promises to mitigate or slow the negative impacts of air pollution, and environmental benefits throughout the LandWorks Report. See e.g. LandWorks Report, pp. 17 (generate sufficient power to be viable) (“Thus, other sources of local energy, from biomass to solar energy farms and wind, are emerging as important elements in Vermont’s energy future.”); 52 (alternative energy), 53 (viable source of power), 54 (“ . . . renewable sources to meet Vermont’s future electricity needs.” and “. . . is a desirable option for generating lower cost local energy that will contribute to a more sustainable future for this region”), 55 (“ . . . wind holds promise to mitigate or slow the negative impacts of air pollution); p. 56 (“Public opinion on the use of wind power . . . to meet the energy needs of our society on a sustainable manner” and “As interest in wind power as an alternative energy source continues to increase, . . .”), 57 (“reversing global warming, contributing to a more sustainable future, and a more healthy environment.”); p. 58 (“Wind power . . . the potential energy and resource benefits it provides” and “Developing fuel and/or power from this resource is integral to the region’s economy” and “. . . support for the project, and wind power in general,”); p. 68 (“The

development of a local source of renewable energy, which will flow directly into the regional power grid will support the orderly development of the region.” and “. . . locally generated alternative energy resources that promote and increase energy independence and reliability.”); p. 70 (“. . . and understand its need and purpose within the larger context of environmental concerns.”) Mr. Raphael clearly had already considered the societal benefits to reach his final opinion that the Project was not, in his opinion, “undue.”

123. Mr. Raphael rendered a simulation containing four turbines that he determined could be seen from Tillotson Camp that a reader of the Report can hardly detect. It substantially misrepresented the views of the Project from Tillotson Camp. LandWorks Report, p. 39.

124. Based on seeing only four turbines, and possibly a fifth, Mr. Raphael concluded that perhaps one light could be seen from Tillotson Camp, and that would be no worse than lights “on the tops of telecommunications towers, and on radio towers . . . are not typically seen as obtrusive or visually offensive.” Report, pp. 38, 39, 45.

125. LandWorks revised its simulations that later showed 21 turbines seen from Tillotson Camp. The height and breadth of the turbines were significantly larger than shown on p. 39 of its May 2010 Report. This would reveal 7 FAA lights, not one light. GMP Exhibit DR – 9(B) (Revised).

126. Even the revised Appendix 9B submitted by Mr. Raphael continued to understate the size of the turbines. Ms. Vissering testified that “(t)he technique used in creating these simulations is less accurate in illustrating the turbines size from these vantage points. . . .” Vissering Surrebuttal, p. 9, l. 9-10.

127. The Lowell Range and turbines appear slightly smaller in the revised simulation than they will in reality from these viewpoints due to the techniques used. Vissering Surrebuttal, p. 10, l. 1-3 and 7-10.

128. Mr. Raphael testified no one needed to worry about hikers/campers seeing the FAA lights since hikers or campers typically look away from the night views, look into the fire or go to bed early due to exhaustion. Trs. 2/8/11, p. 93; l. 20-25 to p. 94, l. 1-8; Trs. 2/9/11, p. 136, l. 22-24.

A. Clear Community Standard for Comprehensive Decommissioning Plan.

129. In evaluating whether a project violates a clear community standard under the Quechee test, the Board routinely looks to the town plan as the primary document for providing these standards. To determine compliance Mr. Raphael looked to the town and regional plans of those commissions within the ten mile viewshed. LandWorks Report, p. 50.

130. Mr. Raphael spent two pages in the LandWorks Report explaining why the NVDA's regional plan's use of the word "should" indicates "only suggestions to be considered by the PSB and are not mandatory standards." LandWorks Report, p. 51.

131. Mr. Raphael's position was that the Project did not violate a clear community standard. The LandWorks Report, dated May 2010, quotes the regional plan: "Applicants must include a comprehensive de-commissioning plan when filing for a Certificate of Public Good." LandWorks Report, p. 51.

132. Mr. Raphael's opinion was that "the only compliance necessary is that each town consider wind energy" even though the language in the plan merely "provides goals that support energy development such as 'Provide an adequate, reliable, and secure energy supply

to meet the region's needs' and 'encourage a diversified portfolio.' ” LandWorks Report, p. 51.

133. When confronted with the language in the regional plan that provides that “applicants must include a comprehensive de-commissioning plan” Mr. Raphael argued that a town or regional plan should not be considered because they were not zoning bylaws. Trs. 2/8/11, p. 98, l. 5.

134. Mr. Raphael later acknowledged that the word “must” contained in the regional plan is mandatory. Trs. 2/8/11, p. 97, l. 14-16; p. 98, l. 3-5.

135. For purposes of his assessment Mr. Raphael interpreted “goals” of energy development as a necessary “compliance” (Report, p. 51, last full para.) and the mandate of a comprehensive decommissioning plan as a “suggestion” or goal. Land Works Report, p. 51; Trs. 2/8/11, pp. 97-98.

136. Mr. Raphael relied on the regional plan to assist him, but then backed away when it was pointed out that the plan actually required a comprehensive plan to be filed when applying for a CPG.

VIII. GMP's Due Diligence Began in Summer of 2008.

137. More than a year prior to retaining David Raphael to justify the aesthetics of the proposed Project GMP began its due diligence. Trs. 2/3/11, p. 54, l. 11-18.

138. GMP began discussing the Project with the landowner in the summer of 2008. Trs. 2/3/11, p. 53, l. 2-7, 15.

139. GMP did its due diligence in 2008 and started work on the Project at that time. Trs. 2/3/11, p. 53, l. 21-22; Trs. 2/3/11, p. 54, l. 11-15.

140. Mr. Raphael followed the Vermont Commission on Wind Energy Regulatory Policy, by evaluating the visual impacts within a ten mile radius of the Project. Trs. 2/8/11, p. 62, l. 24-25 to p. 63, l. 1-2.

141. GMP approached the Town in the summer – fall of 2009 about an agreement. Trs. 2/3/11, p. 55, l. 16-21.

142. GMP offered the tax payment plan of paying \$15 million several months prior to the town vote. Trs. 2/3/11, p. 56, l. 10-15.

143. The Town had a vote in March 2010. Trs. 2/3/11, p. 54, l. 20-21.

144. The tax payments depend on what is actually constructed. Trs. 2/3/11, p. 56, l. 12-25.

145. The town and its residents were aware that they would receive a \$15 million tax payment, plus or minus, at the time of the vote approving the proposed wind project. Trs. 2/3/11, p. 57, l. 3-16.

146. Mr. Raphael relied on the affirmative town vote supporting the Kingdom Community Wind Farm to demonstrate that town residents support wind energy. In fairness, the vote shows that the residents support the wind development project with \$15 million in annual tax revenues.

IX. The Scale of the 21 Turbine Project.

These are difficult types of projects because of their size and location. The GMP Project is the most difficult one yet. It is an exceptionally large project in terms of scale and environmental impact.

147. Mr. Sorenson testified that he was not aware of any project of this scale that's close to construction and impacts on the environment. Trs. 2/24/11, p. 219, l. 7-10.

148. The projects in the past have been relatively easy in terms of aesthetics. Examination of Vissering by Chairman Volz, Trs. 2/8/11, p. 152, l. 23-24.

149. This is not an easy project. The Board has already approved the easy cases. Trs. 2/9/11, P. 153, L. 4-6. These projects are difficult. Trs. 2/9/11, p. 152, l. 20; p. 152, l. 22-25. Far fewer views in the Sheffield and Deerfield cases. Trs. 2/9/11, p. 153, l. 1-3.

150. "A project like this is a very difficult one." From an environmental perspective "there's a net loss." Trs. 2/24/11, p. 218, l. 24-25.

151. At 21 turbines this would be the largest wind energy facility in Vermont to date. Vissering Direct, p. 8, l. 13-14.

152. Originally, both Mr. Raphael and Ms. Vissering underestimated the number of turbines that could be seen from Tillotson Camp. Ms. Vissering estimated in her original testimony that less than the full 21 turbines would be seen from Tillotson Camp, estimating approximately 12-15 turbines could be seen. Mr. Raphael was more conservative in his assessment estimating 4, or possibly five turbines, could be seen from Tillotson Camp. Vissering Direct, p. 8, l. 14-15; LandWorks Report, pp. 38-39.

153. Ms. Vissering felt that the visual impacts from Tillotson were significant because "unlike the view from Belvidere where the turbines occupy a smaller part of a larger view, from Tillotson Camp they would appear far more prominently." Vissering Direct, p. 8, l. 15-17.

154. Mr. Raphael, however, continued to defend his initial estimate that only 4, or perhaps 5 turbines could be seen from Tillotson during cross-examination. Trs. 2/8/11, p. 84, l. 23-25 to p. 85, l. 1-10.

155. Twenty-one 443-foot turbines will have an undue adverse impact on the Long Trail. Trs. 2/9/11, p. 128, l. 24-25.

156. Reducing the size of the Project, especially by reducing some of the southernmost turbines should be seriously considered since these turbines will be the most visible from Tillotson Camp. Vissering Direct, p. 13, l33-34 to p. 14, l. 1.

157. The MOU between the ANR and GMP does not address conserving the ridgeline on the northern and southern ends of the wind farm. Trs. 2/24/11, p. 209, l. 4-22. This is where the Board should consider removing turbines for mitigation, given the scale of the Project, lack of conservation on the southern and northern ends and the permanent impacts.

A. The Turbine Output Directly Affects the Number of Turbines.

GMP is looking to develop a 50-63 MW project. That output can be attained with fewer than 21 turbines.

158. The Project proposed by GMP was very simple: if 20 turbines are approved and they select a 2.5 MW turbine then the output will be 50 MWs; and if 21 turbines are approved and they select a 3.0 MW turbine then the output will be 63 MWs. They never considered other combinations. Trs. 2/3/11, p. 62.

159. GMP has not yet selected a turbine so it does not know whether the size will be governed by a 2.5 MW turbine or a 3.0 MW turbine. It acknowledges, however, that the range of its project is governed by assuming the lower rated MW turbine and using only 20 turbines ($20 \times 2.5 \text{ MW} = 50 \text{ MW}$), and the higher end is reached by using the 3.0 MW turbine times 21 turbines ($21 \times 3.0 = 63 \text{ MW}$). Trs. 2/3/11, pp. 63-65.

160. Throughout GMP's testimony it describes the Project as a maximum of 21 turbines and a maximum of 63 MWs. It often refers to a Project of 20-21 turbines and 50-63 MWs. See e.g. Pughe Direct, p. 5, l. 11-12; p. 16, l. 21.

161. GMP has yet to determine which sized turbines it will use for the Project. Trs. 2/3/11, p. 61, l. 22-24.

162. Because it has not determined which turbine size it will use, it does not know the capacity of each turbine. Trs. 2/3/11, p. 61, l. 25 to p. 62, l. 1-6.

163. GMP is proposing 20-21 turbines. Trs. 2/3/11, P. 62, l. 7-9. It has objected to Ms. Vissering's attempt to mitigate the impact of the Project by opposing such a step as being uneconomic. Surrebuttal of Charlie Pughe, p. 4, Q & A.6; also Trs. 2/3/11, p. 68, l. 9-24; p. 69, l. 6-10; p. 70, l. 4-14. Yet, clearly 50 MWs is considered economic or GMP would not have requested approval for that output level.

164. GMP has proposed and characterized this as a 50-63 MW project. Trs. 2/3/11, p. 62, l. 10-12; p. 63, l. 3-5.

165. With 17-19 turbines at 3.0 MWs each GMP could generate between 51 and 57 MWs, well within the capacity range it was seeking in this docket. Trs. 2/3/11, p. 63, l. 6-9.

166. GMP refused to consider mitigation by reducing the number of turbines because it wanted "to maximize the amount of energy it can extract from this site" Trs. 2/3/11, p. 63, l. 6-23.

167. GMP's approach is to demonstrate that it is maximizing the energy benefits, not attempting to spend money on decommissioning or mitigating the environmental impacts.

168. The Board has much more flexibility to approve the number of turbines than what GMP has revealed. Trs. 2/3/11, p. 63, l. 23-25 to p. 64, l. 1-12.

169. Mr. Pughe agreed that 19 turbines at 3.0 MWs may be superior to 21 turbines at 2.5 MWs, yet GMP is still considering more turbines at 2.5 MW turbines. Trs. 2/3/11, p. 64, l. 25 to p. 65, l. 1-6.

170. Mr. Pughe agreed that the Project is not only about maximizing the capacity factor and siting a wind plant, it also requires balancing the impacts with the benefits. Trs. 2/3/11, p. 65, l. 7-13; p. 66, l. 8-14.

171. When presented with the possibility that fewer turbines would still allow GMP to obtain enough power to meet its 50-63 MW projections Mr. Pughe immediately rejected the idea as inefficient. Trs. 2/3/11, p. 63, l. 6-23.

172. One approach to mitigation under both the *Quechee* decision and a reasonableness standard would be to reduce the scope of the Project by removing turbines at the southern end of the line of turbines. Page, Direct, p. 19, l. 16-21; Direct of Jean Vissering, p. 17, l. 14-18.

X. Mitigation.

If there are permanent impacts there needs to be permanent mitigation.

173. Mitigation is required to offset the direct impacts of the Project for the period that the impacts occur. If there is a permanent impact you need a substantially equal permanent mitigation. Trs. 2/3/11, p. 25, l. 22-25 to p. 26, l. 1-2.

174. GMP represented that it was interested in mitigating only for direct impacts. GMP was not offering mitigation for indirect impacts. Trs. 2/3/11, p. 34, l. 21-25 to p. 35, l. 1-6.

175. The mitigation parcels GMP offered were subject to the grantor constructing roads, installing utility lines, and accessing them to serve other non-conserved properties. Trs. 2/3/11, p. 40, l. 14-25 to page 21; p. 41, l. 7-9.

176. Off-site mitigation should be targeted at benefiting the resources that are impacted. Vissering Direct, p. 19, l. 13-14.

177. The Villeneuve parcel is a type of mitigation that does benefit the general section of the Trail. Trs. 2/9/11, p. 116, l. 1-9.

178. The Villeneuve parcel already exists. The agreement between the GMC and GMP is that if the Project is approved GMP will reimburse the Club for the expenses in conserving the parcel. Trs. 2/9/11, p. 116, l. 19-25.

179. GMP offered to provide the OCAS system as a means to mitigate the nighttime visual impacts from the FAA lights. Trs. 2/3/11, p. 44, l. 9-12.

180. This section of the Long Trail is unique in that it is one of the few opportunities in Vermont to experience a landscape that is relatively free of built elements. Examination by Chairman Volz of Vissering, Trs. 2/8/11, p. 132, l. 4-10.

181. The views from Tillotson Camp are particularly sensitive, and require mitigation to reduce the impacts from the FAA lights. Vissering Direct, p. 15, l. 3-5 and 7-8; p. 17, l. 12-14.

182. Reasonable mitigation measures are available to address the problems presented by the proposal. They include the use of approved technologies to minimize lighting impacts, reduction in scale of the Project, appropriate decommissioning measures, including restoration of the access road and ridgeline, and off-site mitigation. Vissering Direct, p. 4, l. 8-12; p. 13, l. 30-34 to p. 14, l. 1-6; Trs. 2/9/11, p. 112, l. 7-16; p. 203, l. 10-14.

183. The guidelines adopted by the Wind Turbine Guidelines Advisory Committee (WTGAC) dated March 4, 2010, should be followed if at all possible. The national guidelines should be taken very seriously. Trs. 2/9/11, p. 112, l. 9 and 17-25; p. 178, l. 16-18.

184. One of the recommendations of the Wind Turbine Guidelines Advisory Committee is completely reconstructing the site. Trs. 2/9/11, p. 121, l. 21-24.

185. Although the WTGAC proposes removing all infrastructure it is possible to reduce the costs if all of the roads and infrastructure are simply revegetated appropriately, something the ANR/GMP MOU still does not recognize. Trs. 2/9/11, p. 178, l. 21-25 to p. 179, l. 1-9.

186. The applicant has not proposed sufficient mitigation. Trs. 2/9/11, p. 109, l. 17-20.

187. Prior to completing his May 2010 Report Mr. Raphael did not look at the possibility of reducing the number of turbines below the number given to him by GMP. It was simply not a mitigation consideration by Mr. Raphael because he was directed not to do so. Trs. 2/8/11, p. 67, l. 16-25 to p. 68, l. 1-2.

188. Mr. Raphael's Appendix 9G Visual Simulation from Tillotson Camp shows all 21 turbines would be visible from Tillotson Camp, at least 7 lights would be visible, and the access roads, re-grading and turbine pads would be visible from Tillotson Camp. Vissering Surrebuttal, p. 1, l. 23-28.

189. Despite Mr. Raphael's arguments to the contrary, all of the 21 proposed turbines will be seen from the fire pit, the picture window, the open ledges adjacent to these areas. Vissering Surrebuttal, p. 2, l. 8-16.

190. The ridgeline on Lowell Mountain on which the Project will be constructed is a forested ridgeline. Trs. 2/3/11, p. 192, l. 12-15.

191. To construct the Project GMP needs to clear the ridgeline to build the crane path and install the turbines and infrastructure. Trs. 2/3/11, p. 192, l. 16-19.

192. Reducing the number of turbines to 18 turbines (or fewer) along with the implementation of the OCAS system would be a reasonable way of mitigating the visual impacts (given that GMP is not proposing to conserve the permanent impacts on each end of the Project.) Vissering Direct, p. 18, l. 2-5; p. 25, l. 20.

193. Removing the southernmost turbines would reduce the visibility of turbines from that location and reduce the number of lights that would be visible at night. It would also increase the amount of visible undeveloped open space within the view from Tillotson Camp. Vissering Direct, p. 17, l. 14-18; Trs. 2/9/11, p. 176, l. 15-19.

194. Scaling back on the number of turbines begins the process of anticipating cumulative impacts and the need to moderate these types of projects. Trs. 2/9/11, p. 177, l. 18-23.

195. While Ms. Vissering was addressing a simulation by GMP that showed 24 turbines, her recommendation was to remove up to 6 turbines, to bring the total down to no more than 18 or 19 turbines. Vissering Direct, p. 18, l. 1-5.

196. In LandWorks Report attached as part of Mr. Raphael's direct testimony, Mr. Raphael never considered whether fewer than 21 turbines would be appropriate. He simply defended the 21 turbines as "reasonable" and "not undue." Trs. 2/8/11, p. 70, l. 21-22. It didn't matter, of course, in terms of the Long Trail since Mr. Raphael represented to the Board

and parties that only 4, possibly 5 turbines could be seen from Tillotson Camp. LandWorks Report, p. 38.

197. Although Mr. Raphael took into consideration the viability of the Project in his assessment, he did so only in terms of 21 turbines sited on a ridgeline, not in terms of whether the Project would be economically viable with fewer than 21 turbines. Trs. 2/8/11, p. 69-70.

XI. FAA Lights.

FAA lights are very distracting and probably are one of the greatest impacts from a wind farm, especially on camping sites.

198. Nighttime lighting is probably one of the parts of wind energy that creates the greatest impacts. Trs. 2/9/11, p.142, l. 25 to p. 143, l. 1-2.

199. There are two parts to night lighting: the first is the sky glow when lights tend to light a gas station or when lights light up ski slopes; the second is just the presence of the lights. The first tends to bounce off and go up into the atmosphere and make it difficult to see the stars. The second type simply draws attention to itself because the lights are flashing on and off. The second type would be very distracting and hard to ignore, and change the character and quality of the Long Trail experience. Trs. 2/9/11, p. 138, l. 6-25 to p. 139, l. 1-6.

200. Observation of lights from a higher elevation like from the Long Trail presents a larger problem because of the greater intensity of the light from that elevation, but most importantly from areas where people tend to spend the night and where the setting is valued for its nighttime experience. Trs. 2/9/11, p. 140, l. 9-19.

201. In other cases such as Deerfield the campers or hikers could not view the lights from various public parks or vantage points. Trs. 2/9/11, p. 140, l. 20-25 to p. 141, l. 1-19.

202. One of the most important issues in terms of lights is primitive nighttime campsites from which lights may be visible. Trs. 2/9/11, p. 141, l. 20-25 and p. 142, l. 5-8.

203. Seen from above or at a similar elevation, FAA lights are seen at their highest intensity (whereas from lower elevations the intensity is significantly reduced.) Vissering Direct, p. 6, l. 19 to p. 7, l. 1-2.

204. The lights would occupy the entire view and the cycling red flashing would be in sharp contrast to the expected natural setting of Tillotson Camp. Vissering Direct, p. 7, l. 2-4.

205. At least 7 lights would be visible from Tillotson Camp. Vissering Surrebuttal, p. 1, l. 25.

206. Although Mr. Raphael in his rebuttal testimony states that “we do not believe, for instance, that the lights would occupy nearly the entire view opening seen from the shelter” his own Appendix 9B Visual Simulation from Tillotson Camp shows otherwise. Raphael Rebuttal, p. 10; Vissering Surrebuttal, p. 1, l. 17-26.

207. In 2010 two of the three meteorological tower lights were visible when Ms. Vissering visited the camp at night, and no other lights could be seen in the surrounding area. Vissering Direct, p. 7, l. 4-6.

208. Mr. Raphael argued that lights are a common experience in the landscape, but this is not true in views from the Long Trail, and especially from the primitive shelters located along the Trail. Vissering Direct, p. 7, l. 6-8; p. 25, l. 1-3.

209. All of the seven red flashing lights would be visible from across the valley from the camp windows, the fire pit area and nearby ledges. Vissering Direct, p. 7, l. 17-18; Vissering Surrebuttal, p. 1, l. 22-28.

A. The Object Collision Avoidance System (OCAS).

The OCAS system has been approved by the FAA for other types of structures, but not yet for a wind farm. This is a great opportunity to apply this technology to a large scale project.

210. The GMC's biggest concern is the lighting. The Club strongly urges the implementation of the OCAS system. Trs. 2/9/11, p. 110, l. 17-20; p. 146, l. 1-4, 20-23.

211. One of the things important to consider when looking at the impacts is the expected experience level. "What are the expectations of the viewer?" From the Long Trail the expectation is having an experience of a natural viewpoint. Commissioner Burke Examination of Vissering. Trs. 2/8/11, pp. 143-144.

212. Night time lighting is probably the most significant visual impact from wind energy. Examination by Commissioner Burke of Vissering, Trs. 2/8/11, p. 142-143. The impacts from lights are sufficient to justify the OCAS system. Trs. 2/8/11, p. 151, l. 17-21.

213. With the Long Trail there is an expectation of having an experience of a natural landscape. There is not the same expectation of seeing lights on the Long Trail as there is in a residential setting. Trs. 2/9/11, p. 144, l. 1-18.

214. FAA type lights are not common or even visible from Tillotson Camp. Trs. 2/8/11, p. 92, l. 7-10.

215. Mr. Raphael was aware of the OCAS system when he prepared the LandWorks Report. He did not mention them as a possible mitigation tool. Trs. 2/8/11, p. 91, l. 22.

216. Based on visiting Tillotson Camp once in his lifetime, Mr. Raphael did not propose the OCAS system originally because he felt campers do not spend long periods of time outdoors at night. Trs. 2/8/11, p. 94, l. 22-23.

217. Even without impacts to the Long Trail Ms. Vissering would recommend the OCAS system in this case. Trs. 2/9/11, p. 150, l. 20-25 to p. 151, l. 1-6, 15-21.

218. The OCAS system is critical to mitigating the impacts from lights. Without the OCAS system the Project will have an undue adverse impact. Trs. 2/9/11, p. 118, l. 22-25 to p. 119, l. 1-12; p. 120, l. 11-14.

219. The OCAS system is a necessary condition of approval. Trs. 2/9/11, p. 119, l. 9-12; p. 120, l. 2-3.

220. Although night lights do not contribute to light pollution or sky glow, because of the flashing and pulsing, the red lights interfere with the experience of the night landscape. Trs. 2/9/11, p. 107, l. 21-24; p. 108, l. 6-8; p. 169, l. 15-19.

221. The FAA hazard lighting would be highly visible from outdoor cooking and use areas directly in front of the Camp. Vissering Direct, p. 25, l. 16-17; Vissering Surrebuttal, p. 6, l. 18-19.

222. Mr. Raphael did not do an analysis of the impacts from the lights on Tillotson Camp. Trs. 2/8/11, p. 94, l. 24-25 to p. 95, l. 1-7. The only place in LandWorks May 2010 Report where it addressed lights Mr. Raphael maintained that he impliedly considered FAA lights from Tillotson Camp. The first sentence of the fourth full paragraph on p. 45 of the Report provides that "individuals typically do not recreate or spend long periods of time outdoors at night." That was the extent of his analysis relative to the impacts of FAA lights on the Long Trail. LandWorks Report, p. 45; Trs. 2/8/11, p. 93, l. 5-13.

223. Chairman Volz confirmed that Mr. Raphael's analysis was less than comprehensive:

Q. (Chairman) So when you're talking about lights on page – from the project on pages 44 and 45, when you refer to that you're referring to all the lights that are visible from Tillotson or from anywhere relating to the project?

A. (Raphael) That's correct.

Trs. 2/8/11, p. 96, l. 7-13

224. Although LandWorks May 2010 Report clearly identifies “only 4 turbines will be directly visible from Tillotson Camp, with a fifth partially visible” Mr. Raphael maintained when testifying in February 2011 that he did “not at all” consider that visual limitation when he concluded that the FAA lights would not have an undue adverse impact on the Long Trail and Tillotson Camp. Cf. LandWorks Report, p. 38 with Trs. 2/8/11, p. 95, l. 8-14.

225. Mr. Raphael maintained that while the LandWorks Report did not expressly state that campers at Tillotson Camp could see seven FAA lights from Tillotson Camp he implied it and maintained that it was in his thinking. If he was thinking that seven FAA lights could be seen from Tillotson Camp he never explained why it was represented in the same May 2010 Report that a total of only 4 or possibly 5 turbines could be seen from Tillotson Camp. Trs. 2/8/11, p. 95, l. 22-25 to p. 96, l. 2-12.

226. At Tillotson Camp the hiker will be entering camp about dark and will experience a unique natural landscape and FAA lights will destroy the night view. Trs. 2/9/11, p. 130, l. 9-25 to p. 131, l. 1.

227. Mr. Raphael's sole analysis regarding lights appeared on pages 44-45 of LandWorks Report where it is argued that these types of lights are a common sight and are visible throughout Vermont on tops of telecommunications towers and on radio towers, and that viewing at night is limited because individuals typically do not recreate or spend long periods of time outdoors at night. LandWorks Report, p. 45.

228. While there may be sections of the Trail where lights may be seen on telecommunications towers, or distant cities or towns, this section of the Trail remains one of the more remote sections of the Trail and offers an experience which may be increasingly rare to view a dark sky from a remote mountain top cabin. Vissering Direct, p. 12, l. 10-14.

229. Mr. Raphael argued that the lights from the turbines would not affect the night sky in terms of interfering with viewing the stars. Mr. Raphael testified that when he camped he always kept his eyes on the fire, not on the views. He is a hiker and when he camps he cooks his dinner and goes to bed and does not engage in conversation with others or enjoy the night views. Examination of Commissioner Coen of Vissering, Trs. 2/8/11, p. 136, l. 13-24; Trs. 2/8/11, p. 93, l. 18-25 to p. 94, l. 1-8.

230. Mr. Raphael argued that lights from Tillotson “could be conceived more as a curiosity and not necessarily an annoyance.” Raphael Rebuttal, p. 11; Vissering Surrebuttal, p. 6, l. 6-12.

231. One of the unique experiences of camping along the Long Trail is being able to experience a night landscape without artificial light. Vissering Surrebuttal, p. 6, l. 9-10.

232. Outside camping and camaraderie is an absolute part of Tillotson Camp. Campers want to enjoy the night landscape. Examination by Commissioner Coen of Vissering, Trs. 2/8/11, p. 137, l. 20-25.

233. Mr. Raphael’s daytime simulation (Appendix 9B Revised) shows clearly that probably seven lights in a row will be seen from Tillotson Camp flashing on and off. It would be very distracting and hard to ignore, and very much change the character and quality of the experience from Tillotson Camp. Examination by Commissioner Coen of Vissering, Trs. 2/8/11, p. 139, l. 23-25 to p. 139, l. 1-6; Vissering Surebuttal, p. 7, l. 11-13.

234. Primitive camp sites from which lighting may be visible at night is a major concern. For campers spending the night at Tillotson Camp this represents a long duration of view in a location where there is a high expectation of a natural setting. The lights would occupy the entire view opening seen from the shelter. Vissering Direct, p. 14, l. 10-17; Trs. 2/8/11, p. 141, l. 22-25.

B. Object Collision Avoidance System.

235. Reasonable mitigation needs to be employed to address the visual impacts including an Audio Visual Warning System (AVWS) to reduce lighting. Vissering Direct, p. 25, l. 17-19.

236. The Object Collision Avoidance System (OCAS) is referred to by the FAA as an Audio Visual Warning System. It is an acceptable form of marking and lighting that meets established technical standards to identify an obstruction to air navigation. It has not, however, been approved for wind turbines in the United States. Vissering Direct, p. 15, l. 11-20.

237. An AVWS is a radar based obstacle avoidance system that utilizes current obstruction lighting products and does not require additional equipment on aircraft. Vissering Direct, p. 15, l. 15-18.

238. OCAS presents a wonderful opportunity to reduce significantly a major impact of the Project. Commissioner Burke's Examination of Vissering Trs. 2/8/11, p. 146, l. 1-4; Vissering Direct, p. 14, l. 18-21 to p. 15, l. 1-8; Vissering Surrebuttal, p. 7, l. 1-15; Trs. 2/9/11, p. 203, l. 5-7.

239. The approximate cost of the OCAS system is \$1.2 million. Trs. 2/3/11, p. 44, l. 21-25.

240. It costs approximately \$20,000.00 in operational costs each year, increasing the levelized cost of energy by approximately .0012 cents per kilowatt hour. Trs. 2/3/11, p. 45, l. 1-9.

241. GMP has agreed to install the OSCA system subject to finding an appropriate location for the tower and FAA approval. GMP has found an appropriate site and secured an arrangement for the land. Trs. 2/3/11, p. 43, l. 13-17; p. 51, l. 17-25 to p. 52, l. 1-11.

242. Employing the OCAS system is essential to mitigating the visual impacts of the project. Vissering Direct, p. 15, l. 3-8.

243. While the OCAS would not eliminate lights altogether, it would provide a high probability that the night landscape would remain dark and free of artificial lighting. Vissering Direct, p. 14, l. 21 to p. 15, l. 1-2; Trs. 2/3/11, p. 43, l. 21-25 to p. 44, l. 1-5.

244. The FAA will accept, analyze and approve each AVWS on a case-by-case basis. Vissering Direct, p. 16, l. 10-14.

245. The OCAS tower is a much smaller tower (approximately 61 feet tall) that would not require guy wires and would be located south of the southernmost tower. It would be approximately 60 feet high. Trs. 2/3/11, p. 45, l. 12-18; Trs. 2/8/11, p. 54, l. 6-9 and 14.

XII. Decommissioning Plan.

A substantial decommissioning plan is essential given the size and scope of the Project. The proposal still does not meet minimum national standards. Roads and their cut and fill slopes will be highly visible from the Long Trail unless mitigated. The MOU does not address the access road and its stormwater management system. It would be left in place permanently.

246. The decommissioning plan proposed by GMP is inadequate. Vissering Direct, p. 18, l. 7-9; Trs. 2/9/11, p. 78, l. 18-25 to p. 79, l. 1-3.

247. GMP's application proposed to leave the access road, the roads on the ridgeline, the stormwater management system, and not return the Project to its pre-existing land contours, and not accelerate re-vegetation process once the wind farm is decommissioned. Trs. 2/3/11, p. 46, l. 23-25 to page 48, l. 1-9 and p. 49, l. 14-17; p. 52, l. 12-22. Decommissioning must be substantial to ensure there is an opportunity for the mountain to return to its normal state, whether it is 5 years or longer. Colloquy between Chairman Volz and Ms. Vissering. Trs. 2/9/11, p. 173, l. 19-25; p. 174, l. 12-15.

248. The regional plan requires that "applicants must include a comprehensive decommissioning plan when filing for a Certificate of Public Good." Trs. 2/8/11, p.96, l. 20; p. 97, l. 13-16.

249. The Wind Turbine Guidelines Advisory Committee (WTGAC) is a committee comprised of 22 members representing the federal, state, and tribal governments, wildlife conservation organizations and the wind industry. ANR Cross 9; Trs. 2/3/11, p. 48, l. 12-20.

250. The WTGAC states that "decommissioning is a cessation of wind energy operations and removal of all associated equipment, roads, and other infrastructure." Trs. 2/3/11, p. 49, l. 9-11.

251. The WTGAC recommends that "during decommissioning contractors and facility operators should apply BMPs for road grading and native plant reestablishment to ensure that erosion and overland flows are managed to restore preconstruction landscaped conditions." Trs. 2/3/11, p. 49, l. 20-24.

252. GMP was not proposing to follow the WTGAC recommendations in its application. Trs. 2/3/11, p. 50, l. 9-25. Even the MOU falls short of the WTGAC recommendations.

253. A major concern is not simply what occurs after the life of the Project, but the visibility of the cut and fill slopes of the Project from vantage points along the Long Trail during its economic life. Trs. 2/9/11, p. 110, l. 24-25 to p. 111, l. 1, 7-9; p. 113, l. 13-21; p. 121, l. 19-20; p. 175, l. 1-3.

254. The views of the impacts to the mountainside and ridgeline from the Long Trail, and particularly from Tillotson Camp, are critical which can only be addressed by re-vegetation to both. Trs. 2/9/11, p.113, l. 2-9.

255. Cut and fill slopes are most visible because they are vertical, as opposed to roads which tend to be horizontal. Trs. 2/9/11, p. 111, l. 7-8.

256. Roads are also visible because they go up a slope. Trs. 2/9/11, p. 111, l. 10-11. If the road isn't removed, there needs to be a way to re-grade, scarify and rip the surface to allow soils sufficient soils in which roots can take hold and grow. Trs. 2/9/11, p. 112, l. 4-7.

257. The simulations from Belvidere and Tillotson Camp reveal that the roads, including the crane path on the ridgeline, will have a fairly substantial aesthetic impact on the Long Trail, especially Tillotson Camp. Trs. 2/9/11, p. 111, l. 2-6; p. 113, l. 5.

258. There must be measures taken immediately after the Project is completed to begin encouraging the growth of natural vegetation of the slopes. Trs. 2/09/11, p. 111, l. 11-19; p. 113, l. 10-13; p. 121, l. 15-16; p. 175, l. 1-3

259. After the life of the Project there needs to be significant reshaping of portions of the mountain and to roads and areas including turbine pads, crane paths that will be impermeable surfaces, which will make re-vegetation challenging. Trs. 2/9/11, p. 111, l. 20-25.

260. Appropriate decommissioning is essential in order to substantially restore the site to a natural condition once the Project is no longer viable or operational. It is critical

because the Long Trail will exist long after the life of the Project, and the Project ridge is highly visible from open viewpoints along the Trail. Roads and their cut and fill slopes will also be visible from this vantage point. Vissering Direct, p. 14, l. 2-4; p. 18, l. 9-11.

261. GMC's primary concern (other than the FAA lights) is that the site (including the access road and stormwater infrastructure) be revegetated and restored to a natural state as close to the current condition as possible. Vissering Direct, p. 18, l. 18-19; Trs. 2/8/11, p. 77, l. 11-17; p. 78, l. 8-13.

262. A significant issue will be the re-vegetation of cut and fill slopes consisting primarily of blasted rock. Vissering Direct, p. 18, l. 19-21.

263. Storing as much soil during the construction process and distributing it over these slopes following construction would help to encourage vegetative growth in these areas. Scraping or scarifying roads to loosen the soil and encourage more rapid re-vegetation would be a minimum. Vissering Direct, p. 18, l. 21 to p. 19, l. 1-4; Trs. 2/9/11, p. 121, l. 18-20.

264. The GMC is concerned that the retention of roads and infrastructure would enhance further development by this landowner or his heirs that could result in long-term significant impacts on the Long Trail. Vissering Direct, p. 19, l. 3-6.

265. GMP inserted in the Lowell Agreement a decommissioning plan it proposed in its application filed with the Public Service Board. Trs. 2/3/11, p. 59, l. 20-25 to p. 60, l. -3.

266. GMP plans on working on Meek Road (T.H. 25) to access the staging area in the early part of the construction process. Trs. 2/3/11, P. 60, l. 4-10.

267. GMP has agreed to bring Meek Road (T.H. 25) back to its preconstruction condition at the conclusion of the construction of the project. Trs. 2/3/11, p. 60, l. 11-25 to p. 61, l. 1-2.

268. GMP has agreed to put any town road back to its preconstruction condition as part of its agreement with the Town of Lowell. Trs. 2/3/11, p. 61, l. 18-21.

XIII. Cumulative Impacts.

The GMC is concerned about cumulative impacts.

269. Cumulative impacts will become a larger and larger issue for the Long Trail. Trs. 2/9/11, p. 129, l. 24-25 to p. 130, l. 1-5; p. 175, l. 14-25 to p. 176, l. 1-5.

270. There is a point where a ridgeline, a mountain, a region or the state can only accept so many industrial sized wind turbines. Trs. 2/9/11, p. 177, l. 24-25 to p. 178, l. 1-2.

271. The ANR is concerned with additional, large wind projects in the region and along the Trail. Trs. 2/24/11, p. 219, l. 11-25 to p. 220, l. 1-16.

272. Cumulative impacts are a serious issue for a state-wide north/south scenic resource such as the Long Trail. Vissering Direct, p. 22, l. 15-16.

273. The issue for the Long Trail is that it is a linear unit that runs through the state. It's part of a cohesive experience. Thus, as wind projects continue to be applied for they could all begin to have an adverse cumulative impact on the experience of the Long Trail. Trs. 2/9/11, p. 154, l. 13-24.

274. One of the reasons why there should be fewer turbines approved, especially at the southern end of the ridgeline, would be to ensure that the Project did not occupy the entire view from Tillotson. Trs. 2/9/11, p. 176, l. 15-22.

275. The GMC's assessment does not include a determination of societal benefits. Trs. 2/9/11, p. 108, l. 22-25 to p. 109, p. 1-2.

XIV. David Raphael's Testimony Was Incomplete and Flawed.

The LandWorks May 2010 Report misrepresented its methodology relative to Tillotson Camp and misled the reader in terms of the underlying facts (the total size of the clearings, size of the roads and crane paths, etc.) and impacts to the Long Trail (e.g. number of turbines seen from Tillotson Camp). The Report severely understated the impacts of the Project to the Long Trail, misstated the site visits and field checks he or his staff made relative to Tillotson Camp, failed to address the FAA lights relative to the Trail, and inserted discussions about the positive advantages of wind power throughout the May 2010 Report. The Report uses societal benefits improperly in two ways: first to assist LandWorks (and therefore Mr. Raphael) in reaching the conclusion that the Project was only “adverse” and not “undue” under the *Quechee* test (see e.g. Finding 119, above); and second, and perhaps more subtly, Mr. Raphael did not consider certain forms of mitigation such as reducing the number of turbines due to the Project’s economic “viability”, which Mr. Raphael later acknowledged he knew nothing about.

276. Mr. Raphael’s approach was to employ methods that would suggest the Project had fewer and smaller impacts than it actually had. He did so continuously and in a variety of ways. Trs. 2/8/11, p. 45, l. 23-25 to p. 46, l. 1-2; p. 49, l. 24-25 to p. 50, l. 1-9; p. 53, l. 23-25 to p. 54, l. 1; Vissering Surrebuttal, p. 9, l. 9-10 and p. 10, l. 1-2.

277. The LandWorks Report described the Project to reflect a smaller, less intrusive facility, for example: it is a wind generating project “on approximately 3.2 miles of the Lowell Mountains ridgelines” (Report p. 2), the “typical width of the access road will be 18 feet, but will be 32’ wide in some sections to allow sufficient turning radiuses for specialized transportation equipment to move the turbine components to the site” (Report, pp. 4-5), there

“will be a crane path up to 34’ in width to allow a large crawler type crane.” LandWorks Report, pp. 2, 4-5.

278. Mr. Raphael took into account the economic viability of the Project when considering whether the Project was aesthetically appropriate. Trs. 2/8/11, p. 69, l. 14-18.

279. Mr. Raphael, however, didn’t know whether 18, 17 or fewer turbines were economically viable. Trs. 2/8/11, p. 69, l. 24-25 to p. 70, l. 1-3.

280. Mr. Raphael did not assess whether appropriate mitigation should include a reduction in the number of turbines from the 20-21 requested by GMP to some lesser amount. As an expert witness who has done many of these types of projects, it just “wasn’t something that came to the fore.” Trs. 2/8/11, p. 70, l. 18-21; p. 71, l. 7.

281. Mr. Raphael knew of OCAS when he wrote his May 2010 Report but he did not consider it as a tool for mitigation. There was no mention of it in his May 2010 Report. Trs. 2/8/11, p. 91, l. 22.

282. Mr. Raphael chose a model that minimized the visibility of the Project rather than depict a worst case scenario. In doing so, his model would show there would be screening when in fact there wasn’t any screening. Trs. 2/9/11, p. 45, l. 16-25 to p. 46, l. 1-9.

283. Mr. Raphael testified that clearing limits are important to a visual impact analysis if you can see the clearing from the particular vantage point. It depends on the clearing and how visible it is. Trs. 2/8/11, p. 49, l. 23-25 to p. 50, l. 1-4, p. 53, l. 12-13.

284. Simulations illustrating the visibility of clearing and re-grading associated with roads and turbine pads are very useful in understanding the visual impacts from high elevations. Vissering Surrebuttal, p. 9, l. 11-13.

285. Mr. Raphael's initial opinions contained in his May 2010 Report were based on clearing limits of approximately 115.66 acres. Trs. 2/8/11, p. 50, l. 21-24.

286. Nevertheless, LandWork's May 2010 with Appendix 9B does not show any clearings on the simulation. Trs. 2/8/11, p. 60, l. 21-25.

287. Nowhere in LandWorks' May 2010 Report does it state that Mr. Raphael did not have the clearing information to reflect where the roads and crane paths would be located. The simulation simply showed a near pristine view with the wind farm in place without impacts from the clearings although he knew there would be clearings. Trs. 2/8/11, p. 61, l. 3, 9-10.

288. Mr. Raphael used substantially smaller clearings in his simulations to minimize their visual impacts. On the witness stand Mr. Raphael acknowledged that the actual clearing size might be 124 acres, approximately 9 acres greater than the acreage he assumed for his simulations. Trs. 2/8/11, p. 51, l. 14-18.

289. Mr. Raphael testified he did not believe a difference of 5 to 10 acres would affect a simulation because a simulation is an approximation. Trs. 2/8/11, p. 52, l. 3-6.

290. When presented with information that the clearing acreage was actually 149 acres instead of 115 acres Mr. Raphael testified that in his opinion an additional 34 acres still would not make any difference to his analysis. Trs. 2/8/11, p. 55, l. 22-25 to p. 56, l. 1-2.; see also Trs. 2/3/11, p. 194, l. 10 (149.9 acres cleared). Thus, when advised his simulations understated the clearings by approximately 30% he simply argued it didn't matter.

291. The total area cleared would be 149.9 acres. Trs. 2/3/11, p. 194, l. 6-11.

292. The LandWorks May 2010 Report initially described the access road as 18 feet wide but could vary up to 32 feet wide. LandWorks Report at bottom of p. 3. Mr. Raphael

later corrected his characterization stating the access road would vary from 50 to 100 feet or slightly wider. Trs. 2/8/11, p. 62, l. 5-8.

293. Mr. Raphael argued that “the area is currently subject to extensive logging and the lower section of the proposed road provides access to a future lot housing subdivision.” Raphael Rebuttal, pp. 13-14.

294. Mr. Raphael testified that the access road was equivalent to the existing logging roads. Trs. 2/8/11, p. 62, l. 23.

295. There is a significant difference between logging activities and the creation of roads, and clearings associated with wind energy developments, especially when viewed from the prospective of sensitive high elevation areas. Logging roads are relatively narrow with minimal grading. Vissering Surrebuttal, p. 8, l. 1-5.

296. The clearings for the access road will actually vary up to 152 feet wide in some locations with clearing actually “much wider” to accommodate the stormwater management system. Trs. 2/3/11, p. 203, l. 4-15. Since the “clearings” are what are important when simulating the viewshed, Mr. Raphael’s persistent understatement of the clearings shows either his lack of attention to detail or his inclination to continually minimize impacts in favor of the applicant.

297. Mr. Raphael testified that the original Appendix 9B accurately reflected the exiting impact from the logging roads. Trs. 2/8/11, p. 62, l. 10-13.

298. The LandWorks Report erroneously represented that 4 or possibly 5 turbines that would be directly visible from Tillotson Camp “will only occupy the left hand (northerly) portion of the view, and within an area that will constitute only 15% of the total panorama.” LandWorks Report, p. 38; Trs. 2/8/11, p. 84, l. 4-10.

299. Mr. Raphael testified that at the distance of 6 plus miles “the turbines appear so small in the view that they are not a significant visual intrusion into the view. Trs. 2/8/11, p. 84, l. 19-20; *Cf.* simulation on p. 39 of LandWorks Report where turbines are miniscule. Trs. 2/8/11, p. 85, l. 7-10; *Cf.* Finding 76. Jean Vissering testified turbines this size could be “easily visible at 15 miles away.”

300. On February 8, 2011, Mr. Raphael continued to support and in fact stated under oath he had “proved” that only four and perhaps five turbines could be seen from Tillotson Camp through his simulation. Trs. 2/8/11, p. 84, l. 24-25 to p. 85, l. 1-6, 14-19.

301. Mr. Raphael testified at the hearings that his approximate simulation appearing on p. 39 of the LandWorks Report provides a reasonable depiction. Trs. 2/8/11, pp. 84-85.

302. Mr. Raphael was seemingly unaware that his staff later took a photograph and imposed a simulation that clearly shows 21 turbines from the front of Tillotson Camp. Trs. 2/8/11, p. 88, l. 5-11.

303. Mr. Raphael testified that the applicant employed generally available mitigation measures that a reasonable person would consider. Trs. 2/8/11, p. 90, l. 2-6; LandWorks Report, p. 57. This statement was rendered well before any re-vegetation was offered for any of the crane path or associated stormwater system.

304. Mr. Raphael later acknowledged that if GMP left in place the access road, crane paths and stormwater infrastructure after the useful life but “provides for or allows for the revegetation of those particular elements, that that is a reasonable approach to decommissioning.” Trs. 2/8/11, p. 90, l. 19-25 to p. 91, l. 1.

305. Mr. Raphael testified that a visual simulation attempts to portray the impact as closely and as accurately as possible with the understanding that it is a simulation and therefore

there are some margins of errors and approximations. Trs. 2/8/11, p. 52, l. 4-9. The record shows he persistently understated the impacts in his simulations in very significant ways.

306. Mr. Raphael argued that because there are some built elements in the view from Belvidere including the abandoned asbestos mine, Mount Mansfield radio towers, roads and evidence of logging activities the proposal would not be undue. While human elements are present, they occupy a minimal part of the experience, especially along this portion of the Trail. Raphael Rebuttal, p. 10; Vissering Surrebuttal, p. 5, l. 15-21 to p. 6, l. 1-4.

307. The asbestos mine was an environmental disaster and should not be considered as a standard for aesthetics. Trs. 2/9/11, p. 128, l. 7-12.

308. Mr. Raphael relied on surveys to show that hikers generally approve of wind turbines. He discussed a survey of hikers associated with the Redington Wind Project in Maine in support of his visual assessment. Raphael Report, p. 55; also Vissering Direct, p. 21, l. 11-12.

309. According to the survey, those who rated the views as being most scenic perceived the images with wind turbines as very negative. Vissering Direct, p. 21, l. 18-19.

310. The Redington Wind Project was denied by the Maine Land Use Regulatory Commission due to its impact on the Appalachian Trail. A much smaller project was later proposed, the so-called Black Nubble Wind Project and this project was also denied. Vissering Direct, p. 21, l. 19-21 to p. 22, l. 1-2.

311. Particular resources, and not general wind surveys, are what should apply in reviewing any particular case. Vissering Direct, p. 22, l. 10-11.

312. Mr. Raphael relied indirectly on societal benefits to influence his assessment. Vissering Direct, p. 23, l. 7-19; see Findings 121 and 122, above.

313. Mr. Raphael's simulation from Belvidere fire tower consisted of two merged photographs but the turbines appear smaller in these images. The standard for accurate representation is a single frame only at the digital equivalent of 50 mm. Vissering Direct, p. 24, l. 6-17.

314. The photograph Mr. Raphael used in his May 2010 Report to prepare a simulation from Tillotson Camp shows four tiny turbines, barely visible to the naked eye. The simulation is incorrect in two major ways: the turbines would appear much larger in real life, and 21 turbines can be seen from many locations at Tillotson Camp. Raphael Report, pp. 39, and Raphael Revised Exhibit 9B; Vissering Direct, p. 24, l. 28-30; Vissering Surrebuttal, p. 9, l. 4-18. It also means that at least seven of the FAA lights would be visible.

315. Even Mr. Raphael's revised simulations were "less accurate in illustrating the turbine sizes" because of the technique he employed. He continued to attempt to understate the visual impacts. The turbines "appear slightly smaller in the simulation than they will in reality from these viewpoints due to the technique used." Vissering Surrebuttal, p. 9, l. 9-11; p. 10, l. 1-2.

XV. The Memorandum of Understanding

The MOU was negotiated quickly near the end of the hearings and provides only a framework with little or no details. The details are the critical part of the MOU and must be reviewed by the Board before the Project is approved.

316. Putting together the MOU was "fast and frantic" over a few days. Trs. 2/24/11, p. 232, l. 22-23.

317. The significance of the MOU and the overwhelming reason the Agency personnel could agree to the MOU is that there will be an "end date" to an energy project on

Lowell Mountain and at that point a proper decommissioning plan will take effect ensuring re-vegetation of the disturbed areas. Trs. 2/24/ p. 197, l. 19-25; p. 241, l. 9-20.

318. The re-vegetation would include deep ripping to create porous surfaces and then spreading organic materials. The deep ripping would include a re-contour of the site. Trs. 2/24/11, p. 234, l. 6-25.

319. The permanent conservation easement was a large reason for the Agency staff signing off on the MOU. Trs. 2/24/11, p. 197, l. 20-21; p. 198, l. 13-20.

320. The conservation part of the agreement “allows for decommissioning and allows for restoration of the site to a state in which the natural vegetation can become reestablished, and it’s that state in which natural vegetation can become reestablished that I think is critical.” Trs. 2/24/11, p. 198, l. 13-20; p. 202, l. 14-18. “There’s still work to be done. Yes.” Trs. 2/24/11, p. 202, l. 18.

321. The MOU provides a framework and is contingent on GMP obtaining easements prior to the Board’s approval. There are a number of plans identified in the MOU that are not addressed yet. Trs. 2/24/11, p. 200, l. 17-25; p. 202, l. 11-13; p. 206, l. 12-14, 17-23.

322. The issues that have not been worked out yet are critical to the meaning of the MOU. Trs. 2/24/11, p. 206, l. 24-25 to p. 207, l. 1-2.

323. The MOU provides a good framework, nothing more. We don’t have any details yet. Trs. 2/24/11, p. 207, l. 5-10. The Agency isn’t “sure about the overall process.” Trs. 2/24/11, p. 202, l. 21.

324. Mr. Sorenson views the ridgeline at being at high risk for second home development. A big concern is leaving the roads in place for second home development. Trs. 2/24/11, p. 214, l. 3-9; p. 215, l. 1-23.

325. The Board will need to review the details including the easements agreed to before the MOU becomes effective. Trs. 2/24/11, p. 202, l. 19-25. Even though the MOU may provide that some of the details speak to be carried out prior to construction and some prior to commercial operation the Agency intended that all of the terms be complied with prior to the Board issuing its decision. Trs. 2/24/11, p. p. 203, l. 5-7; p. 246, l. 8-25.

326. The timeframe is totally controlled by GMP. ANR has no control over implementing the terms of the MOU. For the Board to consider the MOU GMP must file the details prior to the final PSB decision. Trs. 2/24/11, p. 244, l. 15-17.

327. The parties don't know the details. Trs. 2/24/11, p. 207, l. 8-10. The sooner the details are provided the better. GMP delayed negotiating these issues with the Agency. Trs. 2/24/11, p. 205, l. 15-21. The Agency did not intend to defer these issues for a later date. Trs. 2/24/11, p. 247, l. 21-25 to page 248, l. 4.

328. All of the various plans identified in the MOU require ANR approval before they are submitted to the Board for its approval. Trs. 2/24/11, p. 207, l. 14-19.

329. ANR agrees that if these plans are not finalized and the details "worked out" and approved by the ANR and then subsequently approved by the Board the Project should not go forward. Trs. 2/24/11, p. 206, l. 12-21; p. 207, l. 25 to p. 208, l. 1. The details are critical to determining if "undue" adverse impacts will occur. Trs. 2/24/11, p. 206, l. 24-25 to p. 207, l. 1-2.

330. Because the impacts from this Project are permanent, the ANR believes the easements for this project should be permanent. They are not all permanent. Limited term easements are less appropriate. Sorenson Surrebuttal, p. 12, l. 20-21; Trs. 2/24/11, p. 208, l. 4-14.

331. The “permanent” easement along the ridgeline is limited. It excludes the southern forest string and the northern two turbines of the string that are off the Wileman property. So it includes perhaps 3 ½ miles of the turbine string, although there would be more restoration work to re-contour the ridgelines in those end locations. Trs. 2/24/11, p. 209, l. 4-22.

332. The most sensitive area – the ridgeline – is not being entirely protected and it is one of the areas that does not meet all of ANR’s conditions. Trs. 2/24/11, p. 209, l. 23-25 to p. 210, l. 1. ANR believes it would be preferable to have the full ridgeline protected since the impacts are permanent. Trs. 2/24/11, p. 210, l. 5-8. Nor does it meet the recommendations of the WTGAC. See Findings 249-252, above. It would be preferable to have the full ridgeline protected. Trs. 2/24/11, p. 210, l. 5-8.

333. A portion of the MOU requires a decommissioning plan to restore or revegetate the area. Trs. 2/24/11, p. 209, l. 24-25 to p. 210, l. 1-5.

334. The MOU does not provide for removal or re-vegetation of the access road or associated stormwater infrastructure. Trs. 2/24/11, p. 243, l. 25 to p. 244, l. 1-5. As part of the hasty negotiations it was not included in the MOU. Trs. 2/24/11, p. 244, l. 8.

335. Forests will not regenerate on the access road or stormwater structures, and likely not regenerate on road side slopes for the life of the Project. It is unlikely that forests will regenerate on these compacted rock surfaces for the foreseeable future, especially given the lack of an ecological restoration plan for the Project. Sorenson Surrebuttal, p. 11, l. 3-7.

336. The MOU provides that the easements need to be in place prior to the operation of the Project. However, the Board needs to be informed of the easements and other details.

The work necessary to fulfill the requirements of the MOU must be done prior to the Board issuing a decision in this matter. Trs. 2/24/11, p. 203, l. 1-9; p. 237, l. 1-11.

337. Commissioner Coen clarified the requirement, asking whether this work needed to be done prior to construction or operation of the project. Mr. Sorenson replied that the MOU required the work to be done prior to commercial operation. If this is so, then the Board will have to have approved the MOU and more importantly the Project without seeing the actual easements and other decommissioning details. This is inconsistent with Mr. Sorenson's understanding that the Board should review the details before approving the Project. Trs. 2/24/11, p. 203, l. 5-18.

338. Mr. Sorenson believes that if the details are not met that the Project should not go forward. Trs. 2/24/11, p. 210, l. 20-21.

339. Mr. Coen continued to believe the risk would be on GMP but this would only be true if the details were filed with the Board for public review prior to approval. Trs. 2/24/11, p. 203, l. 19-25.

340. The MOU does not meet the requirements of Mr. Sorenson's prefiled testimony. It is a compromise without detail or a proposed process for public review. Trs. 2/24/11, p. 205, l. 6-7.

341. The MOU allows GMP to modify its terms if there are changes in technology. Trs. 2/24/11, p. 244, l. 24-25 to p. 245, l. 1-3. Even though the MOU does not state that the Agency should have the same right, the MOU was intended to give the Agency the same rights. Trs. 2/24/11, p. 245, lines 8-24.

CONCLUSIONS OF LAW

1. Before the Public Service Board issues a certificate of public good as required under subsection (a) of Section 248, it shall find that the purchase, investment or construction: . . . (5) with respect to an in-state facility, will not have an undue adverse effect on esthetics, . . . the natural environment, . . . , with due consideration having been given to the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8) and (9)(K)."

2. 10 V.S.A. § 6086(a) provides in relevant part that before granting a permit the Act 250 district commission (and in this case, the Public Service Board) shall find that the development "(8) Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas."

3. The Public Service Board has adopted the Environmental Board's *Quechee* test in determining whether a project will have an undue adverse impact. *In re Petition of Tom Halnon*, CPG NM-25, Order of 3/15/01 at 10-11.

4. Once the evidence is compiled on aesthetics, the Board evaluates the economic and overall benefits as required by Section 248 such as present and future demand for service, economic benefit to the state and its residents, the principles of resource selection expressed in the company's least cost integrated plan, and "other societal benefits." 30 V.S.A. § 248(b)(2), (4) and (6). See *In re Northern Loop Project*, Docket No. 6792, Order of 7/17/03 at 28.

5. The Board assesses the economics or societal benefits of a project; the aesthetic witnesses do not. In this instance, the applicant's aesthetic witness had already inserted the societal benefits of local and sustainable energy throughout his Report to emphasize why he believed twenty-one 443 foot tall turbines sitting on the top of Lowell Mountain with 6 ½ miles of roads/crane paths and associated stormwater management systems sufficient to meet a 100

year flood and other large infrastructure were not “undue.” The LandWorks Report continually noted these 443 foot structures generated renewable energy and provided sustainable benefits. Findings 119, 122, *supra*. As a matter of law Mr. Raphael’s opinions were so substantially influenced by the potential benefits of renewable energy that it prevented him from providing an unbiased, disciplined aesthetics’ opinion. At a minimum these “societal” considerations skewed his analysis allowing him to reach his “adverse” but not “undue” opinion. The Project is not just 21 exceedingly large structures, but 21 wonderful wind turbines that provide, in his opinion, diverse societal benefits⁵ that should be approved. That decision is for the Board to make. The insertion of these societal benefits in LandWorks’ analysis was made by a non-energy expert, well before the Board had an opportunity to balance the societal benefit criteria under Section 248.

6. If the Board were to balance the societal benefits with Mr. Raphael’s aesthetic assessment it would be inserting societal benefits a second time and further skew the aesthetic impact of the Project.

7. Because LandWorks Report dated May 2010 is laced with descriptions of the overall benefits of wind power from assertions that this Project will reduce global warming and generate lower cost local energy to promote and increase energy independence it is, as a matter of law, inconsistent with state statute and should be substantially ignored.⁶ The insertion of

⁵ Yet, when he was asked if he understood if reducing the scope of the Project by one or more turbines was viable in terms of mitigating the size and scope of the Project he acknowledged he had no idea. See Findings 278-280, above. As a non-energy expert, Mr. Raphael simply assumed these 21 turbines would provide “societal benefits” thus allowing him to leverage those “benefits” in what might otherwise have been an opinion that the Project had an “undue” adverse impact. Thus, he assumed the “viability” of the Project to reach an “adverse” but not “undue” position and then asserted he couldn’t mitigate the Project in terms of the number of turbines because he didn’t know just how “viable” it was.

⁶ It is difficult, if not impossible, to determine if there might be some benefit to the May 2010 LandWorks Report, but clearly subsequently revised simulations by Mr. Raphael’s staff do provide some benefit to understand the views from Tillotson Camp and the full exposure of the Project. The Board is best able to determine what residual benefits the Report and other filings by LandWorks may have.

these variables by a non-expert in the energy field has undermined the value of his aesthetic assessment as a matter of law. See Finding 122, *supra*.

8. The Board employs a two part test under *Quechee*: first, it must determine whether a project will have an adverse impact on aesthetics and the scenic and natural beauty. In making this determination the Board would have to determine that a project will be out of character with its surroundings.

9. Once a conclusion is made as to the adverse effect of a project, it must determine if the adverse impact is “undue.”

10. An adverse impact is considered “undue” when any one of the following three factors is reached: i.) when the project violates a clear, written community standard; ii.) when the applicant has failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings; and iii.) whether the project offends the sensibilities of the “average person.”

11. All parties have agreed that the Project will have, at a minimum, an adverse impact on the aesthetics and the scenic and natural beauty.⁷

12. As a matter of law the Project is “undue” because the Project violates a clear, written community standard, the first factor to be considered under the second part of the *Quechee* test. The NVDA Plan provides in pertinent part:

* * * * *

3.) Applicants must include a comprehensive de-commissioning
plan when filing for a Certificate of Public Good;

* * * * *

⁷ The GMC’s Proposed Findings show where it disagrees with the applicant in terms of various aspects of the Project, including the impacts from the FAA lights. Both GMC witnesses Page and Vissering have itemized the areas where the Project has an “undue adverse” impact.

LandWorks Report, May 10, 2010, page 51.

13. The Regional Plan provides that applicants must include a comprehensive decommissioning plan when filing for a certificate of public good. Trs. 2/8/11, p. 97, l. 13-16; p. 98, l. 3-5; p. 98, l. 25 to p. 99, l.1-5. The stipulation between the ANR and GMP is intended to amend GMP's existing mitigation and decommissioning plans. Trs. 2/24/11, p. 247, l. 16-23.

14. The Regional Plan is a community standard for purposes of Section 248 requirements. LandWorks Report May 2010, pp. 50-51.

15. GMP did not file a comprehensive de-commissioning plan⁸ when it filed its application for a Certificate of Public Good. While this perhaps would have arguably constituted a deficiency in its application, this deficiency was unclear on the face of the application, in part, because Mr. Raphael had certified that the applicant had "employed generally available mitigation measures that a reasonable person would consider." LandWorks Report, p. 57 (bottom). However, even with the stipulation between GMP and the ANR two clear problems remain:

- i. The stipulation (if it is to be considered a "de-commissioning plan" or a substantive amendment to the "decommissioning plan" GMP had proposed) is not comprehensive because it does not address the conservation of the two ends of the turbine string; nor does it address the re-vegetation of the 2.5 mile long access road and parallel stormwater management system.⁹ It therefore violates a clear, written community

⁸ The GMC agrees for purposes of this case only that the filing of a "stipulation" between GMP and the ANR may meet the NVDA standard if GMC's concerns identified in paragraph 7.i. and 7.ii. are met.

⁹ Since the GMC is not a party to the stipulation and was not asked to comment or participate in its negotiations it is not prepared to agree to the "agreement" without being supplied details and necessary support for future plans.

standard – the first prong in determining if the impacts are “undue.” By failing to remove or revegetate 2.5 miles of major infrastructure and failing to conserve the northern and southern ends of the ridgeline, in contravention of the recommendations of the WTGAC, the testimony of GMP witness David Raphael and record evidence in this case and the NVDA Regional Plan the stipulation fails as a matter of law to constitute a comprehensive de-commissioning plan, or even a reasonable one; and

- ii. The stipulation also violates the regional plan because GMP has merely filed a “framework” anticipating a later, more comprehensive filing at some unknown date.¹⁰ It has identified six plans to be developed. The record shows that the Agency intends that both its staff and the Public Service Board must review and approve of the yet to be developed plans. Trs. 2/24/11, p. 246, l. 17-22. The parties must, as a matter of law, be given notice and an opportunity of a hearing to address the adequacy of the plans.¹¹ The GMC recognizes that its participation is limited to the issue of aesthetics, however, the remaining issues largely implicate “clearings” created to accommodate infrastructure that GMP does not propose to revegetate or otherwise address and will therefore remain forever without proper re-vegetation and de-commissioning.

¹⁰ The record is unclear when the parties to the stipulation anticipate filing the plans and details. The stipulation refers to filing the plans and receiving the Agency’s sign-off prior to commercial operation, yet Mr. Sorenson’s testimony on February 24th strongly indicates that it must be done prior to receiving a CPG from the Board. Trs. 2/24/11, p. 246, l. 17-22. Due process would require nothing less.

¹¹ GMC agrees that a post-submittal hearing need not include prefiled testimony and written discovery but at a minimum it should include a fair opportunity for the parties to review the filings and possibly depose GMP/ANR witness(es). This could be done on an expedited time frame given the time deadlines GMP is operating under.

16. As a matter of law the Project is “undue” for a second reason because the applicant “failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings.” Mr. Raphael expressly testified as follows:

Q. Do you believe a reasonable person would believe that a wind developer should have a decommissioning plan that would leave the roads and crane paths and stormwater infrastructure in place after the energy stopped flowing?

A. (Raphael) I think that if the developer provides for or allows for the re-vegetation of those particular elements, that that is a reasonable approach to decommissioning.

Trs. 2/8/11, p. 90, l. 19-25 to p. 91, l. 1.

The Applicant’s primary witness on decommissioning agreed that a reasonable person would revegetate the roads, crane path and stormwater infrastructure. For GMP to side step the record evidence, agree to a “framework” with the ANR that eliminates re-vegetating the roads and stormwater management system on the mountain side is not legally supportable and is not consistent with the second factor that requires the applicant to take generally available mitigating steps which a reasonable person would take.

17. As a matter of law the Project is “undue” for a third reason. The Project offends the sensibilities of the “average person” because the visual impact would be out of context when viewed from certain vantage points on the Long Trail. The average person is also a “reasonable person”, and therefore she or he would agree that the applicant should at least mitigate the access road and associated stormwater management system as Mr. Raphael testified, as the Agency and the Club advocated and as the WTGAC recommends.

18. As a result of failing to meet any of the three factors of the second step in the *Quechee* analysis the Project will have an undue adverse impact on aesthetics. See e.g. The

Environmental Board determined a proposed condominium site located is an aesthetically sensitive area, 1,000 feet from the shore of Lake Champlain should be denied because the mass of the buildings would have a profound visual impact and would be out of context with its surroundings. *Northshore Development, Inc.*, #4C0626-5-EB (12/29/88). [EB #391]

19. The Public Service Board should find that as a matter of aesthetic impact the siting of twenty-one 443 foot tall turbines on a scenic ridgeline, with seven FAA lights, has an undue adverse impact. The Board shall take into account the mitigation proposed and may balance the impacts with the proposed societal benefits under Section 248.

20. Section 9(K) "criteria is broader than the actual visual impact of a project;" Trs. 2/8/11, p. 48, l. 25 to p. 49, l. 1-2.

21. A public investment does not need to be recognized as a scenic resource for its use and enjoyment to be evaluated under the public investment criterion. Trs. 2/8/11, p. 49, l. 4-8.

22. The *East Haven* decision initially denying the application is different from the Kingdom Community Wind Farm case because the *East Haven* decision was not based on aesthetic considerations, but was initially denied based on significant public investment. Trs. 2/9/11, p. 157, l. 14-21; p. 158, l. 8-16.

23. *East Haven* does not govern the aesthetic criterion relative to the Long Trail. Trs. 2/9/11, p. 159, l. 17-22.

24. Unlike *East Haven*, the Long Trail has substantial recreational/scenic designations very specific to the Long Trail. Trs. 2/9/11, p. 158, l. 8-25; p. 159, l. 1-8, 17-22.

25. The Kingdom Community Wind Farm fails the *Quechee* test unless there is a decommissioning plan equal to the size of the Project, which would include at a minimum re-

vegetating the access road and stormwater management system, implementing OCAS and carrying out the ANR stipulation.

CONCLUSION

We suspect Mr. Sorenson was most correct when he said “there’s a large degree of uncertainty in determining what is undue and what is adverse.” Trs. 2/24/11, p. 219, l. 1-4.

Chairman Volz’s assessment was also very insightful when he commented:

Well one way to approach this whole case is not to focus - is to say – is to say okay, these projects are undue to some extent. Maybe not to a tremendous extent, but they are to some extent undue, but the benefits outweigh that and they should be approved anyway. And then the fights in the case would be over the benefits versus the detriment, or would be a fight about or a discussion about what the benefits really are and whether they are enough to overcome that the fact that there is a certain amount of undue impact here.

Trs. 2/8/11, p. 154, l. 25 to p. 155, l. 1-13.

Mr. Sorenson’s estimation that this was perhaps the largest construction project in the state and that even with the MOU in hand there was still a “net loss” environmentally is important because the societal benefits of a wind project are intended to benefit the environment, not merely provide new kwh’s which can be obtained from a variety of regional sources.

GMP is not asking for a 10 or 20 MW project on top of a ridgeline. It knew going into this hearing that its proposal presented major environmental issues of such a magnitude that they had never been encountered before in this state. Whether you characterize the impacts as “adverse” as Mr. Raphael did, or identify them as “undue” in certain respects as other witnesses did such as GMC’s, the real question to the Club is how to deal with them.

In order to approve meaningful mitigation, including a meaningful decommissioning plan, the Board needs to trust the “experts” and understand the issues, understand why certain elements are required (like stormwater systems, crane paths, etc.) and how it’s best to mitigate their impacts during both the life of the Project and immediately after the life of the Project.

If the applicant presents a witness who is confident he or she can simply deflect every question and testify that the decommissioning plan – one that really contained no plan for the roads, crane path, ridgeline, stormwater management system, lights, etc. - was reasonable as Mr. Raphael did in his May 2010 Report then the Board doesn’t receive a fair assessment from the applicant. GMP’s strategy compounded the problems by presenting an amendment to its decommissioning plan (in the form of a stipulation) two days before the hearings closed. That approach deprived the parties of a fair opportunity to understand the depth and quality of the proposal. The “stipulation” lacks definition and detail, further depriving the parties and the Board of what the plans will entail.

GMP wants to be known as a green company. Yet, it elected not to present a green decommissioning plan, or even a minimally acceptable one, when it filed its application. The recommendations of the WTGAC would require the total removal of all infrastructure and re-contouring of the landscape. Those recommendations seem rather reasonable especially for a large scale project like this one. The Club and the Agency are prepared to accept a re-vegetation plan instead of removal of the infrastructure. Unfortunately, the Agency was not successful in including the removal or re-vegetation of the access road and stormwater management system in the stipulation given the time frame it was working under.

The GMC respectfully urges the Board to require the re-vegetation of the access road and stormwater management system at the end of the commercial life of the Project. The Club

also respectfully requests that the Board look closely at the reasons why GMP could not offer a permanent conservation on the two ends of the turbine string and whether further mitigation is required due to that failure.

GMP started this case by arguing that it must have a commercially operational plant by 12/31/12, yet its strategy has been to withhold any meaningful mitigation and decommissioning plan until near the end of the hearings. That was neither fair nor wise.

Despite these problems, the Green Mountain Club supports alternative energy and reasonable wind development. While it believes the Project may need to be reduced in scope – especially if the full four mile ridgeline is not permanently conserved – the Club also believes that whatever happens with the ridgeline and number of turbines - the access road and the stormwater system need to be revegetated at the end of the Project's operational life. The OCAS system presents a unique opportunity to mitigate perhaps the greatest visual impact caused by the Project.

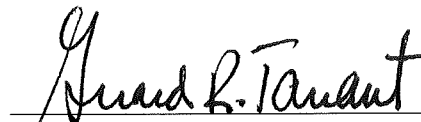
The "stipulation" is no more than a "framework." The major concessions by ANR had to be made under time constraints imposed by the Administration and GMP, and as a result the stipulation does not provide this Board with the final answers.

GMC believes it has presented an impartial critique by Ms. Vissering, someone who tried to assess the strengths and weaknesses of this Project. The GMP respectfully submits the Project can be permitted with conditions identified herein.

DATED at Montpelier, this ___ day of March, 2011.

TARRANT, GILLIES, MERRIMAN
& RICHARDSON

BY:

A handwritten signature in cursive script, appearing to read "Gerald R. Tarrant", written over a horizontal line.

Gerald R. Tarrant, Esq.

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